STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Superfund
401 Church Street
Nashville, TN 37243-1538

May 23, 1995

Robert P. Morris
State Project Officer
North Superfund Branch
Waste Management Section
U. S. EPA Region IV
345 Courtland Street
Atlanta, Georgia. 30365

Dear Mr. Morris:

Enclosed are 2 Preliminary Assessments and 1 Site Investigation Prioritization. The Preliminary Assessments are:

Site	EPA Id	State Id	State Recommendation
Flat Top Mountain Dump	TN0000271955	33-650	Site Inspection
Cumberland Lumber Co.	TND004040663	89-506	NFRAP

Site Investigation Prioritization is:

Van Water and Rogers	TND987768561	75-527	NFRAP

At this time there are 2 PA's, 5 SI's, and 2 ESI's are still owed to you.

Sincerely

John T. Weakley
Site Assessment Coordinator

PRELIMINARY ASSESSMENT

NARRATIVE REPORT

CUMBERLAND LUMBER COMPANY

McMINNVILLE, WARREN COUNTY, TENNESSEE

CERCLIS No. TND004040663

TENNESSEE FILE No. 89-506

Received 5/24/95

Prepared for the
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF SUPERFUND (TDSF)
in cooperation with
WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

DATE: May 1, 1995

Prepared By	Reviewed By
John Kizer	Brenda K. Apple
John Kizer 5/1/95	Brenda K. Apple 5-1-95

TABLE OF CONTENTS

ATTACHMENTS

REPORT:	Preliminary Assessment Narrative Report
SITE:	Cumberland Lumber Company McMinnville, Warren County, Tennessee
CERCLIS NO.:	TND004040663
TN FILE NO.:	89-506
PREPARED BY:	John Kizer, Environmental Specialist Tennessee Department of Environment and Conservation Division of Superfund (TDSF)
DATE:	05/01/95

1.0 INTRODUCTION

The Tennessee Division of Superfund (TDSF), under cooperative agreement with the U.S. Environmental Protection Agency (EPA), conducted a Preliminary Assessment (PA) at the Cumberland Lumber site in McMinnville, Warren County, Tennessee. This investigation was performed under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), and the Superfund Amendments and Reauthorization Act of 1986 (SARA).

1.1 Objectives

The purpose of this investigation was to collect information concerning conditions at Cumberland Lumber sufficient to assess the threat posed to human health and the environment and to determine if additional investigation under CERCLA/SARA or other authority is necessary.

1.2 Scope of Work

The objectives were achieved through the completion of specific tasks which included:
- review of available file information;
- a comprehensive target survey;
- interviews with representatives of local public agencies;
- and on/off site reconnaissance.

2.0 SITE CHARACTERIZATION

2.1 Location

Cumberland Lumber Company (the Site) is located at Red Road and Sparta Street, on the eastern side of McMinnville. The geographic coordinates are 35° 41' 15" N latitude and 85° 45' 45" W longitude (Ref. 25). To reach the Site exit I-24 at Murfreesboro and take highway 70S East. Upon arriving at McMinnville take the 70S East Bypass toward Sparta. After approximately 2.5 miles take a right onto Red Road. Follow Red Road until it dead ends into Sparta Street. The Site is located to the northeast (Ref. 1).

McMinnville is characterized by a temperate climate. Summers are hot and humid with highs in the upper 80's while winters are relatively short and mild with lows in the 20's. Average year round temperature is 58.5°. Normal annual precipitation is 53.30 inches (Refs. 3,).

2.2 Site Description/Operational History

The Site is located in an industrial/commercial/residential area of McMinnville near the corner of Red Road and Sparta Street. A railroad track runs along the northwest side of the Site. The area is completely open on all sides. An unnamed intermittent stream begins northwest of the property and flows southward under the railroad tracks and across the Site. In general, the surrounding topography slopes toward this stream from both sides. Two sanitary sewer lines, one old and one new, parallel the stream on the eastern side (Ref. 2).

Potential problems at the Site are a contaminated spring (Referred to as "Red Spring") and eight drums being stored in the open. The drums are located on the corner lot owned by Cumberland Company. The spring is located near the boundary between the Cumberland Lumber lot and the lot to the northwest owned by Billy Harper and John Parker (Refs. 6,18,22).

Cumberland Lumber Company has produced hardwood strip flooring since 1945. Their active facility is located north of the railroad tracks on Red Road. Although they own the 2.7 acre lot at the corner of Red Road and Sparta Street they do not use it. The property has one abandoned building that is used by the county Emergency Management Agency for storage. The former owner of the property was A.P. Rich (Refs. 2,5,14,22,26).

Formfit Rogers, a manufacturer of women's apparel, operated a business on the adjoining 6.53 acre lot from 1941 until 1995 (Refs. 14,24). Until 1992 the property was owned by Genesco Incorporated. In 1992 Charles and Joyce Maybery became the owners and in 1994 Billy Harper and John Parker purchased the lot (Ref. 22). There are presently two vacant buildings on the property which are being renovated into warehouses for lease/rent/sale. It appears they have been making further improvements to the property by filling in the low areas on the southwest side of the lot. The dirt fill material has covered the location where Red Spring used to emerge (Refs. 2,24). In 1994 there was another old storage building just

Figure 1

Site Location Map
Cumberland Lumber Company

2A

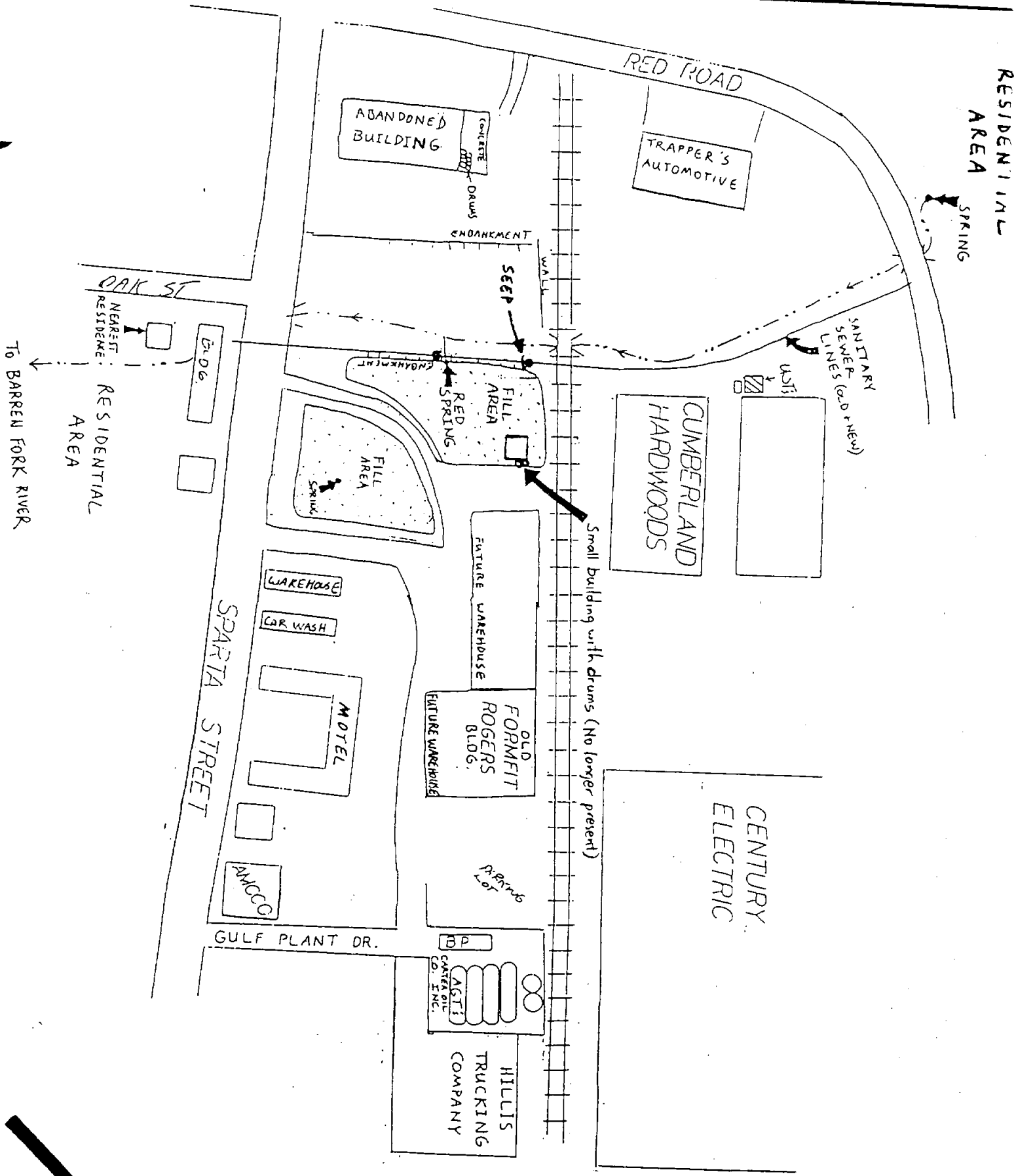

Figure 2

Cumberland Lumber Company Site Sketch
EPA# TND004040663

southwest of the larger buildings that had several drums of unknown contents stored in it (Ref. 4). The building and drums are now gone. There is a spring located in the fill area near Sparta Street that was not contaminated in January 1994 (Ref. 2).

A complaint of a fuel odor from Red Spring in January 1994 lead to an investigation by the Tennessee Division of Underground Storage Tanks (Ref. 15). They found the spring to be contaminated with hydrocarbons and solvents which gave it a bright red/orange color. This may explain the origin of it's name. Red Spring is located approximately 300 feet northwest of Sparta Street near it's junction with Oak Street. It emerged from the bottom of a embankment and flowed approximately 40 feet southeast into the intermittent stream. The upper 15 feet of the spring is now covered by dirt fill from the Formfit Rogers property (Refs. 2,4). After a rainy period in April 1995 Red Spring was not flowing; hence, it may now be plugged by the fill material. However, a small seep northwest of Red Spring near the railroad tracks was observed to have a sheen. The seep originates just northeast of a sanitary sewer manhole cover at the bottom of the ridge formed by the fill material (Ref. 24).

During the January 1994 investigation by the Tennessee Division of Superfund, eight drums in poor condition were discovered on the north side of the abandoned building on the Cumberland Lumber lot. The drums are sitting on a concrete pad and are believed to contain roofing tar and water. They are on the opposite side of the embankment from Red Spring and are not considered a source for it's contamination (Ref. 2).

The possible sources of contamination in Red Spring include:

1. The city sanitary sewer is directly adjacent to the spring and the seep. A new sewer line was put in next to the old one, which was left in place, approximately four years ago. Red Spring may not have existed before this time. The sewer lines may be leaking contaminants directly into Red Spring or contaminants may follow the lines due to increased permeability of the material surrounding the pipes. Sanitary sewer lines upgradient from the site serve a large area to the north and west which is mostly residential (Refs. 2,21).

A similar situation existed at a spring in McMinnville's Riverfront Park. Sanitary sewer lines run adjacent to the spring and it too was stained orange from iron bacteria and iron deposits. However, it was sampled and found to be non-detect for hydrocarbons and solvents (Ref. 20).

2. The Cumberland Hardwoods facility has two under ground storage tanks and a dispenser island approximately 700 feet upgrade from Red Spring on the northern side of the railroad tracks. They've had no known problems with these tanks (Refs. 4,21).

3. In January 1994 the embankment to the northeast toward Formfit Rogers appeared to consist partially of construction debris. The debris is no longer visibly present, but it is unknown if it was removed or covered. Additionally, there used to be a small building in that direction that contained drums of unknown contents (Refs. 2,4).

4. Carter Oil Company Inc. has several above ground petroleum tanks and is located about 800 feet to the north in an upgrade direction. No known problems exist here (Refs. 2,4,21).

5. An Amoco service station is located about 800 feet to the northeast and is hydrogeologically upgradient of the spring. No known problems exist here (Refs. 2,4,10).

6. Hillis Trucking Company is located approximately 1000 feet to the northeast (Ref. 2). There are drums of waste oil and a 12,000 gallon above ground fuel tank on site. They routinely wash trucks on site and wash water could contain sediment, oil, grease, fuel and other pollutants. In May 1991 and October 1994 neighbors filed complaints with the Tennessee Division of Water Pollution Control (TDWPC) about this water standing in their backyards. In December 1994 the TDWPC received a complaint of a 200 gallon diesel spill. Diesel fuel was standing in ditches and had blackened the backyards of two residences. The Tennessee Division of Solid Waste Management was notified and has been overseeing the cleanup. Since this area is hydrogeologically upgradient of Red Spring contaminants infiltrating into the ground could be transported in that direction (Refs. 2,10,12).

7. Trapper's Automotive is located west of the Site on the other side of the railroad tracks. No known problems exist here (Ref. 2).

2.3 Offsite

Century Electric, a state Superfund site, is located approximately 1000 feet to the northwest near the dividing ridge in the residuum aquifer. No PCB contamination from Century Electric has been detected in Red Spring and ground water at that Site is believed to flow in a northern direction (Ref. 10).

2.4 Waste Characteristics

In January 1994, a noticeable sheen with the odor of weathered gasoline and a sweet smell associated with solvents emanated from Red Spring. In addition, the presence of Gallionella ferruginea, a common iron bacteria, and a strong iron buildup indicated the presence of hydrocarbons. The spring was sampled by the Tennessee Division of Underground Storage Tanks in January 1994 and was found to contain Benzene, Ethyl Benzene, Toluene, O-Xylene, M&P Xylene, 1,1 Dichloroethane, 1,1 Dichloroethene, and Trichloroethene (Ref. 4). Benzene and 1,1 Dichloroethene levels were greater than the Maximum Contaminant Levels listed for drinking water (Ref. 19). In April 1995, Red Spring was dry and there was no odor or presence of iron bacteria/iron buildup. Vegetation in the area also appeared normal. However, a small seep with a sheen was noticed approximately 100 feet northwest of Red Spring which indicates the source of contamination may still be present (Refs. 2,24).

Of the eight abandoned drums at the Site, two have unattached lids, two are bulging, and the rest are in poor condition (Ref. 6). The drums are believed to contain roofing tar and water (Refs. 2,27). Roofing tar is composed of miscellaneous hydrocarbon mixtures (Refs. 17). The drums are on a concrete pad and there are no signs that the tar has spread off the pad (Ref. 2).

3.0 GROUND WATER PATHWAY

3.1 Hydrogeologic Setting

The Site is located on the eastern flank of the Highland Rim near it's boundary with the Cumberland Plateau (Ref. 1). This is an area of well developed karst terrain, formed in Mississippian Limestones. The McMinnville Geologic Quadrangle indicates that the geologic structure, drawn on the top of the Warsaw Limestone, is dipping to the southeast in the vicinity of Cumberland Lumber. Since confining layers largely determine ground water flow elevation and direction, it is highly unlikely that ground water will flow for any appreciable distance to the northwest which is against the dip. To flow against the dip, it would have to breach the Lower Warsaw Confining Layer. Additionally, investigations performed near the Site indicate the potentiometric surface is higher to the northwest between Mile Branch and Bybee Branch. Karst studies have determined that ground water flow in the area near the site is to the south and southeast (Ref. 10). Due to the close proximity of the sanitary sewer lines natural ground water flow may be altered causing more water to be directed toward Red Spring (Ref. 2).

Rock formations at the site are (from top to bottom) St. Louis Limestone, Warsaw Limestone and the Fort Payne Formation (Ref. 28).

The St. Louis Limestone is a fine-grained limestone that is dolomitic and cherty and has a total thickness of about 180 feet. However, it may not even be present at most locations near the Site, having been weathered into residuum. The soil residuum is composed of silts and clays containing weathered chert nodules and fragments. Depth to bedrock can be up to 35 feet ,but varies due to an irregular bedrock surface. This forms a porous-medium, laminar-flow aquifer in the vicinity of the Site which supplies water to Red Spring. Depth to this aquifer is approximately ten feet. There appears to be a dividing ridge in the residuum aquifer about 1000 feet northeast of Red Spring, which separates ground water flowing northward from that flowing south/southeast (Refs. 10,11). This aquifer is not used by area wells (Refs. 8,13).

The Warsaw Limestone is 45-80 feet thick in this area. Hydrologically it acts as three different units. There is an upper confining layer, a middle karst aquifer, and a lower confining layer. The Upper Warsaw Confining Layer is a siliceous, calcareous, siltstone/sandstone bed at the top of the Warsaw Limestone. This bed appears to be responsible for a perched water table in the lower St. Louis Limestone. Red Spring is perched on the Upper Warsaw Confining Layer and feeds an intermittent stream which sinks upon breaching this unit to become a cave stream flowing within the Middle Warsaw Karst Aquifer. The Middle Karst Aquifer is composed of thin to thick bedded bioclastic limestone. The cave stream is perched upon the Lower Warsaw Confining Layer which is composed of calcareous, siliceous siltstones and cherts located in the lower 25-30 feet of the Warsaw Limestone. Springs along the Barren Fork River cascade off of this confining layer down into the river.

No springs have been found in the lower Warsaw Confining Layer. This formation can be a good aquifer if a solutional cavity is encountered (Ref. 10).

The underlying Fort Payne Formation is 45+ feet thick and composed of cherty limestone that is largely dolomitic and in part silty. It outcrops along the Barren Fork River. No springs have been found in this formation and there is probably very little recharge through the lower Warsaw Confining Layer into an aquifer in the Fort Payne Formation (Ref. 10). In the vicinity of the nearest drinking water well, this formation forms an aquifer at a depth of 43 feet (Ref. 8,13,28).

3.2 Ground Water Targets

Areas within and immediately outside McMinnville are served by the city water supply and the remaining portion of the area is served by the Warren County Utility District. Both of these get their water from a surface water supply. It is estimated that approximately 100 or less homes in the entire county are still served by private water wells. However, there are known to be six residences that are still on well water within the area of concern. With an average of 2.57 people per household about 16 people would be affected. The nearest drinking water well is about 1.8 miles to the north (Refs. 1,8,13,16).

3.3 Ground Water Conclusions

A release to ground water is known to have occurred in the surficial aquifer at the Site ,but municipal water is believed to be used by all residents near this area. The nearest well in use is 1.8 miles away and five other wells are known to be used within the area of concern. However, due to an extensive karst study performed in this area, it is possible to determine that even though there are residential wells within four miles they are not very likely to be contaminated from the Site. Hence, a current drinking water supply has probably not been affected. Nevertheless, the surficial aquifer at the Site is of concern (Refs. 1,4,8,10,13).

4.0 SURFACE WATER PATHWAY

4.1 Hydrologic Setting

The Site is not located in a flood plain (Ref. 31). Soils in the area are mostly the Cumberland silt loam. This soil is well drained and will allow rapid infiltration; therefore, reducing surface runoff in areas not altered by development (Ref. 29). Runoff that does occur will flow to an intermittent stream which drains the valley. This main stream begins as a spring north of the railroad tracks and flows southeast under the railroad and across the Site. On the Site it is surrounded on each side by an embankment. In January 1994, Red Spring began about 300 feet northwest of Sparta Street and flowed west about 40 feet into the main stream (Ref. 2). The upper 15 feet of Red Spring is now covered by dirt fill which may cause flow to be redirected. The intermittent stream bed, which is on the Upper Warsaw Confining Layer,

continues southeast for about 1200 feet till it reaches the Middle Warsaw Karst Aquifer. There the stream sinks underground. It is believed to flow 500 feet southwest through cave passages to a spring which emerges above the Lower Warsaw Confining Layer and flows about 200 feet down a ravine into the Barren Fork River. This is the Primary Point of Entry (PPE) (Refs. 2,10).

From here the Barren Fork River Flows East 3.75 miles into the Collins River. Barren Fork River is estimated to have an average flow rate of 600 cfs. The Collins River flows north for the remainder of the 15 mile downstream pathway. The average flow rate of the Collins River is 1,157 cfs (Refs. 1,7).

4.2 Surface Water Targets

There are no drinking water intakes located within 15 downstream miles of the Site. McMinnville City Water Supply Intake is located on the Barren Fork River upstream from the PPE. Likewise, Warren County Utility District Water Supply Intake is located on the Collins River upstream from the Barren Fork River confluence. The Cumberland Pigtoe (Pleurobema Gibberum), is a mussel that inhabits this area and is listed on State and Federal Endangered Species List. Both rivers are considered to be fisheries and are used for recreational boating. The Collins River is also listed as a State Scenic River. (Refs. 8,30).

4.3 Surface Water Conclusions

The surface water pathway is not a major concern because of the distance to the Primary Point of Entry and the amount of dilution from the Barren Fork River. Additionally, there are no drinking water intakes downstream (Refs. 2,4,8).

5.0 SOIL EXPOSURE AND AIR PATHWAYS

5.1 Physical Conditions

The Site is located in an industrial/commercial/residential area of McMinnville. Access to the property is unrestricted. There are eight drums in poor condition on the Cumberland Lumber Company lot. They are located on the north side of the abandoned building on a concrete pad. They are suspected to contain roofing tar and water. Red Spring emerges from the bottom of an embankment, 300 feet northwest of Sparta Street near it's intersection with Oak Street, and flows into an unnamed intermittent stream. Red Spring was contaminated with hydrocarbons and solvents in January 1994, but presently is not flowing and shows no signs of contamination. However, a small seep about 100 feet northwest of Red Spring has a sheen. The intermittent stream that drains the Site flows south through the backyards of a residential neighborhood and empties into the Barren Fork River (Refs. 2,4,27).

5.2 Soil and Air Targets

There are currently no workers on-site, but there are residences and businesses nearby. The closest residence is on Oak Street, about 400 feet away. The nearest businesses are the active Cumberland Lumber Company facility and a pool hall at the corner of Oak Street and Sparta Street. Both of these are approximately 350 feet away. Beginning 400 feet downstream of Red Spring the intermittent stream flows through the backyards of 13 homes (Refs. 2,24). If contaminants have moved downstream up to 30 residents could be within 200 feet of contaminated sediment (Ref. 16). The population living within 0.25 miles of the Site is 1182, 1232 live within a 0.25 to 0.5 mile radius, 2110 live within a 0.5 to 1 mile radius, 7893 live within a 1 to 2 mile radius, 3770 live within a 2 to 3 mile radius, and 1006 live within a 3 to 4 mile radius. Total population within four miles of the Site is 17,193 (Ref. 16).

5.3 Soil Exposure and Air Pathway Conclusions

The soil exposure pathway could be of concern, particularly if contaminants move downstream to where the stream flows through the residential area. This would place contaminated sediment in the backyards, and within 200 feet, of several residences. However, this does not seem likely at present. Contamination no longer appears to be getting into the intermittent stream in significant amounts. Additionally, the contaminants of concern are volatiles which has probably allowed previous contamination to dissipate over time (Refs. 2,4).

Due to the high volume of dilution in the ambient air and the lack of workers or residences in the immediate vicinity of the Site the air pathway is not a concern at this site (Refs. 2,24).

6.0 SUMMARY AND CONCLUSIONS

The Site is located in an industrial/commercial/residential area of McMinnville, TN. Problems at the Site include a contaminated spring and eight abandoned drums (Ref. 2).

In January 1994 Red Spring was producing water; it had an odor of solvents and weathered gasoline and orange stains from iron bacteria and iron buildup. The Tennessee Division of Underground Storage Tanks sampled the spring and found hydrocarbons and solvents. Red Spring emerges from the bottom of an embankment between two industrial properties and flows into an intermittent stream which goes through the backyards of a residential neighborhood. There are at least seven different possible sources for the contaminated ground water including the city sanitary sewer system (Refs. 2,4). During a return visit in April 1995 (15 months later), the spring had been partially covered by fill and was not producing water, there were no odors, and there were no orange stains present. Vegetation also appeared to be growing normally. Hence, it is unknown if the spring is still contaminated. However, a small seep about 100 feet northwest of Red Spring was noticed to have a sheen; indicating that the source of contamination may still exist (Ref. 24).

There are eight drums are at the Site in poor condition. They are believed to contain roofing tar and water. (Refs. 2,27).

A release to ground water is known to have occurred in the surficial aquifer at the site; however, municipal water is believed to be used by all residents near this area and it is unlikely contamination in this aquifer will affect a drinking water supply (Refs. 8,13).

The surface water pathway is not a major concern because of the distance to the Primary Point of Entry and the amount of dilution from the Barren Fork River. Also there are no drinking water intakes in the 15 mile downstream pathway (Refs. 2,4,8).

The soil exposure pathway could be of concern if contaminants migrate downstream. This would place contaminated sediment in the backyards, and within 200 feet, of several residences. However, contamination no longer appears to be entering the intermittent stream in significant amounts and the contaminants of concern are volatiles. Hence, sediments 400 feet downstream are not likely to show contamination (Refs. 2,4).

Due to the high volume of dilution in the ambient air and the lack of workers or residences in the immediate vicinity of Red Spring the air pathway is not a concern at this site (Ref. 24).

Red Spring is not flowing and shows no signs of contamination; however, it may now be plugged by fill material. A small seep with a sheen about 100 feet northwest of Red Spring indicates that a source of contamination may still exist. Based on information presented, No Further Remedial Action Planned (NFRAP) by the federal government is appropriate for this site. The site should be turned over to the State for any appropriate action.

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23. City of McMinnville (Warren County) Assessor of Properties Office. State of Tennesseee Real Estate Appraisal Card for 202 Red Road McMinnville, Tennessee. Tax Year 1992.

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26. Tim Stewert, TDSF. Phone conversation with Ray Spivey Jr. of Cumberland Lumber Company. Subject: Drums at 202 Red Road. March 24, 1994.

27. Tim Stewart, TDSF. Phone conversation with John Jackson of Cumberland Lumber Company. Subject: Drums at 202 Red Road. June 30, 1994.

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30. John T. Weakley, TDSF. Correspondence to Brenda Apple, TDSF. Subject: Threatened and Endangered Species for Cumberland Lumber Company, 89-506. April 26, 1995.

31. John Kizer, TDSF. Phone conversation with Assessor of Properties Office McMinnville, Tennessee. Subject: Flood plain information. April 28, 1995.

APPENDIX A

REFERENCE 1

OVERSIZED

DOCUMENT

REFERENCE 2

Date: 3/30/95
Facility: Cumberland Lumber Co.
Site: 89-506
Type Facility: Unused lot with contaminated spring
County: Warren
City: McMinnville
State: TN
Purpose of visit: Site reconnaissance & sewer line information

State Personnel: John Kizer (JTK)
Tim Stewart (WTS)
Other People contacted:
Duke Brown (McMinnville City Water Dept.)

Photos: No
Samples: No
Weather: Sunny, 50's, windy
Vehicle: SI-LR80
Milage: 177

John Kizer 3/30/95

0920 Arrived at Cumberland Lumber Company site. Observed area behind Trapper's Automotive and next to Cumberland Lumber where intermittent stream flows. Stream was dry. No possible sources were noticed behind Trapper's Automotive. Inspected the eight drums next to abandoned building on the site. Some drums were bulging and lids were ajar. They appeared to contain roofing tar and water. These drums are on a concrete pad and there are no signs the tar has spread off of it. The drums are on the opposite side of the embankment from Red Spring and are not considered a possible source of contamination to the spring. There was a narrow strip of soil among grass vegitation that appeared to be where Red Spring flowed. Red Spring may now be partially covered by dirt fill. The soil showed no evidence of orange stains and no

John Kizer 3/30/95

odor was noticed. Vegitation in the area did not appear stressed. The sanitary sewer line runs by very close to where Red Spring originates and is a possible source of contamination.

0940 Left site to observe surrounding area. Followed the intermittent stream bed southward to where it enters the river. It flows through the back yards of a residential neighborhood. The nearest residence is approximately 400 feet from the origin of Red Spring. Observed location where stream goes underground and then emerges at a spring about 500 feet to the southwest. The water from this spring goes directly down a ravine into the Barren Fork River.

0950 Observed area that had been filled in by dirt and the location

of a nearby spring that was not contaminated. Formfit Rogers has two buildings. The one to the west appears to now be vacant. A sign out front indicates they intend to lease the building as warehouse space. Formfit Rogers makes ladies apparel. Possible sources of contamination to Red Spring from the northeast are: an Amoco service station at Sparta Street and Gulf Plant Drive, Carter Oil Company Inc. on Gulf Plant Drive, and Hillis Trucking Company on Gulf Plant Drive. No potential problems were noticed at any of these locations by off-site observation.

1015 Went to McMinnville City Water Department. Spoke to Duke Brown about location of sanitary sewer lines. New

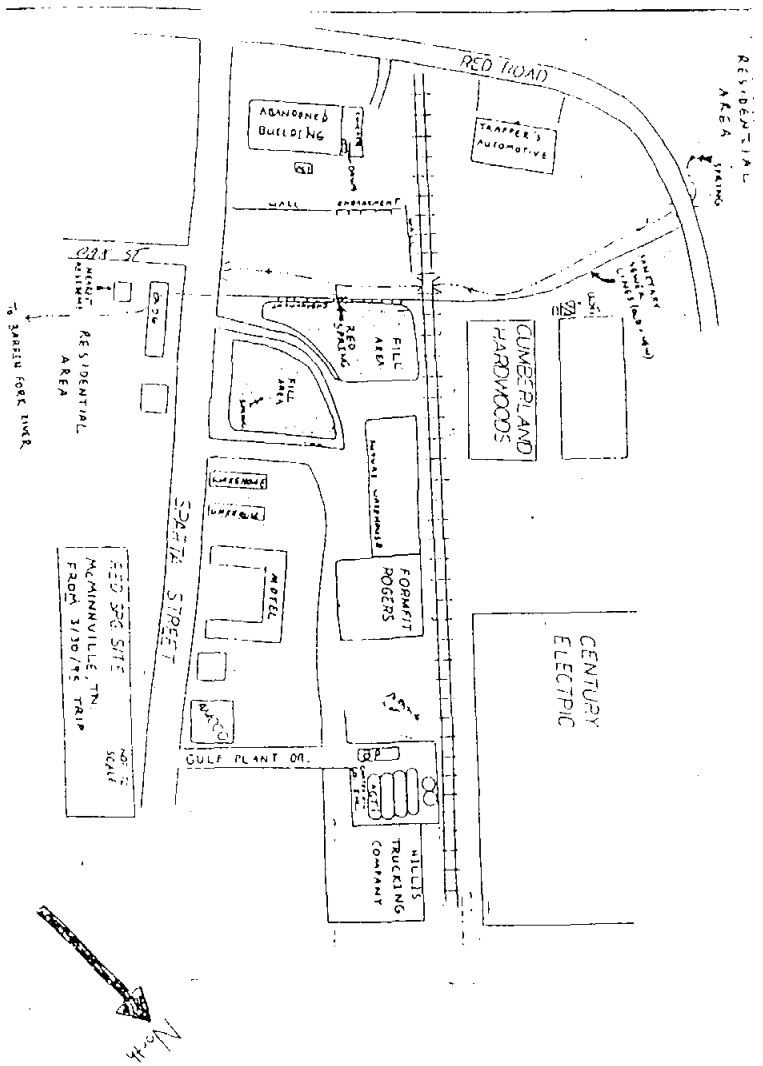
sewer lines were put in next to the old ones in the area of the site about 4 or 5 years ago. Sewer line location is shown on the site sketch. He stated they have not had any problem with solvents or hydrocarbons in the sewer system.

Summary

Went to McMinnville, TN. and performed an on-site and off-site reconnaissance of the Cumberland Lumber Company site. Visited McMinnville City Water Department to determine route of sanitary sewer lines.

John Kyle 3/30/95

SITE SKETCH



John Kyle 3/30/95

REFERENCE 3

CLIMATOGRAPHY OF THE UNITED STATES NO. 81

Monthly Station Normals of Temperature, Precipitation, and Heating and Cooling Degree Days 1961-90

TENNESSEE

James R. Owenby and D.S. Ezell

January 1992

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Climatic Data Center
Asheville, North Carolina

TENNESSEE

TEMPERATURE NORMALS (DEG F)

STATION		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
KINGSPORT	NORMAL MAX	45.7	50.7	61.9	71.2	78.5	84.7	87.1	86.4	81.0	71.2	60.0	49.7	69.0
1900 LT	NORMAL MIN	26.4	28.6	36.8	44.4	52.8	60.5	64.5	63.8	57.7	45.8	37.8	30.3	45.8
	NORMAL	36.1	39.7	49.4	57.8	65.7	72.6	75.8	75.1	69.4	58.5	48.9	40.0	57.4
	MEDIAN	35.5	39.3	49.3	58.0	65.1	72.6	76.0	74.7	69.0	58.2	48.4	40.2	57.4
	MID OBS TIME ADJ MAX	-1.3	-1.2	-1.6	-1.7	-1.0	-.9	-.6	-.8	-.9	-1.1	-.9	-1.3	
	MID OBS TIME ADJ MIN	-1.2	-1.1	-.9	-.9	-.6	-.4	-.3	-.4	-.6	-.9	-1.1	-1.1	
KINGSTON SPRINGS	NORMAL MAX	45.0	49.9	60.5	71.1	78.4	86.0	89.3	88.6	82.5	72.6	60.9	49.1	69.5
0700 LT	NORMAL MIN	21.5	24.4	33.9	42.5	51.4	60.1	64.5	62.9	55.7	41.7	34.0	26.1	43.2
	NORMAL	33.3	37.2	47.2	56.8	65.0	73.1	76.9	75.7	69.1	57.2	47.5	37.9	56.4
	MEDIAN	33.4	37.0	47.3	56.3	64.3	73.3	76.9	75.4	68.8	56.7	47.6	38.5	56.6
	MID OBS TIME ADJ MAX	.2	.4	.3	.3	.2	.1	0	0	-.1	.0	0	.0	
	MID OBS TIME ADJ MIN	1.4	2.0	1.1	.0	0	.0	-.1	-.2	.2	.3	.4	1.0	
KNOXVILLE WSO AP	NORMAL MAX	45.9	50.9	61.3	70.4	77.6	84.5	87.1	86.7	81.2	70.6	59.9	50.1	68.9
2400 LT	NORMAL MIN	26.0	29.1	36.6	44.6	53.1	61.8	66.0	65.3	59.0	46.0	37.5	30.0	46.3
	NORMAL	36.0	40.1	49.0	57.5	65.4	73.2	76.6	76.0	70.1	58.4	48.7	40.1	57.6
	MEDIAN	35.3	39.9	48.9	57.8	65.2	73.3	76.9	76.1	70.2	57.8	49.2	40.0	57.7
	MID OBS TIME ADJ MAX	0	0	0	.0	.0	.0	0	0	.0	0	.0	0	
	MID OBS TIME ADJ MIN	0	0	0	.0	.0	.0	0	0	.0	0	.0	0	
KNOXVILLE UNIV OF TN	NORMAL MAX	45.9	50.2	61.0	70.6	77.5	84.4	87.2	86.4	81.0	70.5	60.3	50.0	68.8
1000 LT	NORMAL MIN	28.5	31.5	40.1	48.4	56.8	64.2	68.4	68.0	62.2	49.2	40.9	32.7	49.2
	NORMAL	37.2	40.8	50.6	59.5	67.2	74.3	77.8	77.2	71.6	59.9	50.6	41.4	59.0
	MEDIAN	37.2	40.5	50.7	59.7	66.6	74.3	77.6	76.7	71.6	59.4	50.6	41.5	59.0
	MID OBS TIME ADJ MAX	.1	.1	.2	.0	.0	.0	.0	.0	-.2	-.1	-.2	.0	
	MID OBS TIME ADJ MIN	-.4	-.7	-.5	-.7	-.5	-.4	-.3	-.4	-.7	-.7	-1.0	-.5	
LAFAYETTE	NORMAL MAX	45.1	50.6	61.5	71.5	78.9	85.5	88.4	87.5	81.9	72.0	60.3	49.6	69.4
1700 LT	NORMAL MIN	25.4	28.9	37.9	46.2	54.1	61.8	65.3	63.7	57.5	45.8	38.4	29.8	46.2
	NORMAL	35.3	39.8	49.7	58.9	66.5	73.1	76.9	75.6	69.7	58.9	49.4	39.7	57.8
	MEDIAN	35.3	39.2	49.8	58.6	66.1	74.0	76.3	75.3	69.8	58.5	49.3	40.5	57.8
	MID OBS TIME ADJ MAX	-1.4	-2.0	-1.7	-1.7	-1.5	-.8	-.8	-.8	-.8	-1.2	-1.0	-1.2	
	MID OBS TIME ADJ MIN	-1.3	-1.2	-1.0	-.8	-.6	-.4	-.3	-.4	-.6	-.9	-1.1	-1.1	
LAWRENCEBURG FILT PLT	NORMAL MAX	46.4	51.3	61.1	70.8	77.5	84.4	87.8	87.0	81.0	71.7	60.7	50.5	69.2
2300 LT	NORMAL MIN	25.2	28.5	37.0	44.8	52.9	60.7	64.7	63.4	57.4	44.3	36.7	28.4	45.4
	NORMAL	35.8	39.9	49.1	57.8	65.2	72.6	76.2	75.2	69.2	58.0	48.7	40.0	57.3
	MEDIAN	35.8	39.5	48.3	58.0	64.8	72.6	75.9	74.7	68.9	57.9	49.1	40.3	57.3
	MID OBS TIME ADJ MAX	.3	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
	MID OBS TIME ADJ MIN	-.2	-.3	-.1	-.1	-.1	-.1	-.1	-.1	-.2	-.1	.0	-.1	
LEBANON 3 W	NORMAL MAX	45.2	49.7	60.3	70.5	78.5	86.4	89.6	88.7	82.7	72.2	60.2	49.7	69.5
0700 LT	NORMAL MIN	22.8	25.8	35.6	44.7	53.0	61.8	65.8	64.3	57.1	43.6	36.1	27.7	44.9
	NORMAL	34.0	37.8	48.0	57.6	65.8	74.1	77.7	76.5	70.0	57.9	48.2	38.7	57.2
	MEDIAN	34.0	37.6	48.3	57.2	65.3	74.0	77.6	76.1	69.6	58.0	48.5	39.2	57.1
	MID OBS TIME ADJ MAX	.2	.4	.3	.3	.2	.1	0	.0	-.1	-.1	.0	0	
	MID OBS TIME ADJ MIN	1.4	2.0	1.1	.0	.0	-.3	-.1	-.2	-.4	-.3	.4	.9	
LENOIR CITY	NORMAL MAX	45.8	50.4	60.8	70.5	77.9	84.9	87.8	87.3	81.7	71.5	60.5	50.0	69.1
0700 LT	NORMAL MIN	25.0	27.2	35.8	44.1	53.0	61.7	65.7	64.9	58.3	44.8	36.6	28.2	45.5
	NORMAL	35.5	38.9	48.3	57.3	65.5	73.3	76.8	76.1	70.1	58.2	48.6	39.4	57.3
	MEDIAN	35.0	38.3	48.4	57.6	65.3	73.4	76.7	75.4	70.1	57.8	48.4	39.1	57.3
	MID OBS TIME ADJ MAX	.2	.1	.3	.3	.2	.1	0	0	-.1	-.1	.0	.0	
	MID OBS TIME ADJ MIN	1.1	1.7	1.6	1.1	.8	.0	.3	.2	.1	.7	.9	.8	
LEWISBURG EXP STN	NORMAL MAX	45.6	50.1	59.9	69.9	77.7	85.2	88.3	88.0	82.0	71.8	60.4	50.0	69.1
0800 LT	NORMAL MIN	23.9	26.8	35.6	44.2	52.7	61.4	65.6	63.9	57.3	44.2	36.4	28.2	45.0
	NORMAL	34.8	38.5	47.7	57.1	65.3	73.3	76.9	76.0	69.7	58.0	48.4	39.1	57.1
	MEDIAN	34.8	38.1	47.5	56.8	64.6	73.6	76.8	75.3	69.3	57.4	49.0	39.4	57.1
	MID OBS TIME ADJ MAX	.2	.3	.3	.2	.2	.1	0	0	-.1	-.1	-.1	0	
	MID OBS TIME ADJ MIN	.5	1.0	-.1	-.5	-.4	-.2	-.3	-.4	-.6	-.4	-.5	.3	
LEXINGTON	NORMAL MAX	46.5	51.1	61.2	71.9	79.1	86.7	89.7	88.8	83.2	73.6	61.2	50.5	70.3
0700 LT	NORMAL MIN	25.2	28.4	37.1	46.2	55.1	63.9	67.8	66.5	60.2	46.8	38.7	29.7	47.1
	NORMAL	35.9	39.8	49.2	59.1	67.1	75.3	78.8	77.6	71.7	60.2	50.2	40.2	58.8
	MEDIAN	35.7	39.4	49.8	58.8	66.9	75.3	78.5	77.6	71.8	59.9	50.4	40.4	58.6
	MID OBS TIME ADJ MAX	.2	.3	.3	.3	.2	.1	0	0	-.1	-.1	.0	0	
	MID OBS TIME ADJ MIN	1.3	1.9	1.1	.0	0	.0	-.1	-.2	.2	.3	.4	.9	
LINCOLN 2	NORMAL MAX	46.5	51.6	61.9	72.2	78.9	86.3	89.2	88.5	82.8	72.8	61.6	51.0	70.3
0700 LT	NORMAL MIN	22.8	26.0	34.5	43.6	52.5	60.7	65.1	63.4	56.5	42.6	35.1	27.2	44.2
	NORMAL	34.7	38.9	48.3	57.9	65.7	73.5	77.2	76.0	69.7	57.7	48.4	39.2	57.3
	MEDIAN	35.3	37.9	47.8	58.2	65.6	73.8	76.8	75.7	69.3	57.7	48.3	39.6	57.2
	MID OBS TIME ADJ MAX	.2	.4	.3	.3	.2	.1	0	0	-.1	0	0	0	
	MID OBS TIME ADJ MIN	1.4	1.9	1.1	.0	0	.0	-.1	-.2	.2	.3	.4	1.0	
LIVINGSTON RADIO WLIV	NORMAL MAX	45.4	50.4	61.2	70.7	77.7	84.7	87.3	86.6	80.8	70.7	59.7	50.0	68.8
1600 LT	NORMAL MIN	25.1	27.9	36.6	44.4	52.2	59.9	63.9	62.4	56.3	44.1	36.7	29.6	44.9
	NORMAL	35.3	39.2	48.9	57.5	64.9	72.3	75.6	74.5	68.5	57.4	48.2	39.8	56.8
	MEDIAN	35.3	38.5	49.1	57.6	64.6	72.4	75.3	74.2	68.7	57.6	48.3	40.4	56.8
	MID OBS TIME ADJ MAX	-2.0	-2.0	-2.3	-2.3	-1.8	-1.2	-1.0	-1.0	-1.3	-1.7	-1.6	-1.8	
	MID OBS TIME ADJ MIN	-1.4	-1.2	-1.0	-.8	-.6	-.4	-.3	-.4	-.7	-.9	-1.2	-1.1	
MARTIN U OF T BRANCH	NORMAL MAX	43.6	48.3	59.4	70.0	78.5	86.6	89.6	88.8	82.6	72.5	59.9	48.2	69.3
0700 LT	NORMAL MIN	23.1	26.6	37.0	47.1	55.7	63.9	67.5	65.3	58.2	45.9	37.3	28.2	46.3
	NORMAL	33.4	37.5	48.2	58.6	67.1	75.3	78.6	77.1	70.4	59.2	48.6	38.2	57.7
	MEDIAN	33.6	37.4	48.3	58.5	66.6	75.5	78.3	76.8	70.4	59.3	48.5	38.9	57.6
	MID OBS TIME ADJ MAX	.2	.4	.3	.3	.2	.1	0	0	-.1	0	0	0	
	MID OBS TIME ADJ MIN	1.4	2.0	1.2	.0	0	.0	-.1	-.2	.2	.4	1.1	.9	
MC MINNVILLE	NORMAL MAX	47.2	51.8	61.9	71.6	78.5	85.5	88.0	87.2	81.3	71.8	61.1	51.5	69.8
1800 LT	NORMAL MIN	27.4	30.5	38.7	46.4	54.1	61.8	65.7	64.9	59.1	46.5	38.9	31.6	47.1
	NORMAL	37.3	41.2	50.4	59.0	66.3	73.7	76.9	76.1	70.2	59.1	50.0	41.5	58.5
	MEDIAN	37.5	40.8	50.5	59.1	66.0	73.8	76.4	75.4	69.9	59.1	50.3	41.9	58.4
	MID OBS TIME ADJ MAX	-.7	-.6	-.8	-1.0	-.8	-.4	-.5	-.4	-.4	-.6	-.5	-.7	
	MID OBS TIME ADJ MIN	-1.0	-.9	-.8	-.7	-.5	-.3	-.3	-.3	-.5	-.7	-.9	-.9	
MEMPHIS FAA-AP	NORMAL MAX	48.5	53.5	63.2	73.3	81.0	89.3	92.3	90.8	83.9	74.3	62.3	52.5	72.1
2400 LT	NORMAL MIN	30.9	34.8	43.0	52.4	61.2	68.9	72.9	71.1	64.5	51.9	42.7	34.8	52.4
	NORMAL	39.7	44.2	53.1	62.9	71.2	79.1	82.6	81.0	74.2	63.1	52.5	43.7	62.3
	MEDIAN	40.3	44.7	53.7	62.8	71.1	79.1	82.3	80.8	73.8	62.8	52.5	44.0	62.3
	MID OBS TIME ADJ MAX	0	0	0	0	.0	0	0	.0	0	.0	.0	.0	
	MID OBS TIME ADJ MIN	0	0	0	0	.0	0	0	0	0	.0	0	.0	

NOTE: 1. ADJUSTMENT FACTORS WILL ADJUST TEMPERATURE TO MIDNIGHT OBSERVATION TIME.
2. TIME APPEARING UNDER STATION NAME IS CURRENT OBSERVATION TIME.

TENNESSEE

PRECIPITATION NORMALS (INCHES)

STATION		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
INGSTON SPRINGS	NORMAL	3.81	4.58	5.58	4.51	4.72	3.90	4.18	3.68	3.90	3.25	4.71	5.12	51.94
	MEDIAN	3.42	3.99	4.73	4.38	4.92	3.51	4.17	3.05	3.20	2.99	4.50	4.48	51.05
KNOXVILLE ASO AP	NORMAL	4.17	4.06	5.09	3.72	4.13	3.97	4.67	3.13	3.07	2.84	3.75	4.54	47.14
	MEDIAN	4.17	4.14	4.31	3.43	3.88	3.95	3.65	3.05	2.69	2.85	3.70	4.05	47.03
KNOXVILLE UNIV OF TN	NORMAL	4.27	4.01	4.91	3.62	4.42	4.11	4.49	3.74	3.23	3.04	3.97	4.54	48.35
	MEDIAN	4.55	3.78	4.47	3.36	3.94	3.85	4.17	3.21	3.03	3.24	3.92	4.13	48.73
LAFAYETTE	NORMAL	4.18	4.28	5.51	4.47	5.23	4.42	5.07	3.98	4.00	3.45	4.85	5.72	55.16
	MEDIAN	3.83	3.91	4.19	4.39	5.33	3.89	4.67	3.48	3.64	3.55	4.52	5.24	53.88
LAWRENCEBURG FILT PLT	NORMAL	4.83	4.60	6.39	4.70	5.56	3.49	4.62	3.62	3.98	3.54	5.10	5.56	55.98
	MEDIAN	4.22	4.17	5.29	4.34	5.11	2.99	4.25	3.09	3.24	3.39	4.34	5.22	53.39
LEBANON 3 W	NORMAL	3.98	4.22	5.32	4.47	4.78	4.11	4.58	4.12	3.76	3.26	4.54	5.03	52.17
	MEDIAN	3.93	3.88	4.85	4.24	4.38	4.08	3.87	3.57	3.22	3.55	4.08	4.33	50.06
LEBANON 7 N HUNTERS PT	NORMAL	4.03	4.30	5.35	4.50	4.75	4.01	4.44	4.07	3.94	3.21	4.57	5.18	52.35
	MEDIAN	3.59	3.82	4.91	4.20	4.39	3.77	4.38	4.03	3.29	3.34	4.22	4.52	50.76
LENOIR CITY	NORMAL	4.72	4.56	5.96	4.29	4.68	4.04	5.08	3.88	3.30	3.19	4.19	5.09	52.79
	MEDIAN	4.70	4.54	4.78	3.78	4.19	3.74	4.66	3.56	2.87	2.99	4.19	4.64	53.70
LEWISBURG EXP STN	NORMAL	4.49	4.12	5.97	4.67	5.66	3.85	5.19	3.25	3.79	3.81	4.85	5.05	54.70
	MEDIAN	4.12	3.65	4.95	3.92	5.28	3.47	4.58	2.69	3.28	3.68	4.13	4.38	53.31
LEXINGTON	NORMAL	3.64	4.28	5.27	4.62	5.07	3.74	4.64	3.01	3.67	3.32	4.59	5.05	50.90
	MEDIAN	3.21	3.64	5.23	4.13	4.30	3.08	3.97	2.53	3.08	3.20	4.20	3.92	49.30
LINDEN 2	NORMAL	4.61	4.64	5.74	4.87	5.51	4.16	4.60	3.62	3.64	3.24	5.13	5.95	55.71
	MEDIAN	3.99	4.39	4.78	4.34	5.04	4.01	4.19	3.78	3.10	2.96	5.24	5.43	52.85
LIVINGSTON 5 NE	NORMAL	4.38	4.24	5.25	4.76	5.10	4.25	5.45	3.97	3.94	3.09	4.28	4.99	53.80
	MEDIAN	3.85	4.09	4.73	5.07	5.02	3.75	5.05	3.53	3.74	2.86	4.23	3.89	55.70
LIVINGSTON RADIO WTPR	NORMAL	4.19	4.17	5.16	4.34	4.99	3.97	5.32	4.07	3.83	3.10	4.50	5.18	52.82
	MEDIAN	3.79	3.71	4.89	4.85	4.66	3.95	4.48	3.68	3.60	2.80	4.21	4.16	53.42
MARTIN 3 SE	NORMAL	3.62	4.30	5.27	5.04	4.80	4.31	4.31	3.41	3.73	3.50	4.86	5.30	53.10
	MEDIAN	2.88	3.76	4.95	4.75	4.39	3.89	4.26	2.93	3.34	3.23	4.56	5.01	52.88
MC MINNVILLE	NORMAL	4.34	4.25	5.83	4.46	5.09	4.18	4.80	3.14	3.88	3.43	4.57	5.03	53.30
	MEDIAN	3.93	4.00	5.10	3.79	4.85	3.86	4.80	3.32	3.91	3.31	4.44	4.25	54.26
MEMPHIS FAA AP	NORMAL	3.73	4.35	5.41	5.46	4.38	3.57	3.79	3.43	3.53	3.01	5.10	5.74	52.12
	MEDIAN	3.48	3.98	4.97	5.19	4.59	3.71	3.86	3.30	3.43	2.68	4.93	5.12	51.05
MILAN 6 NW	NORMAL	3.94	4.46	5.22	4.98	5.33	4.55	4.46	3.51	4.30	3.21	4.85	5.67	54.48
	MEDIAN	4.09	3.55	4.76	4.71	4.42	4.00	4.38	2.73	3.43	2.87	4.29	4.98	52.38
MONTEAGLE	NORMAL	5.61	5.32	6.79	5.24	5.55	3.90	5.67	4.09	4.54	4.24	5.71	5.84	62.50
	MEDIAN	5.70	5.56	5.37	4.64	5.46	3.37	5.25	3.91	3.93	4.30	5.40	4.90	60.57
ONEIDA	NORMAL	5.19	4.77	5.98	5.00	5.50	4.67	5.13	4.65	4.26	3.84	5.10	5.56	59.65
	MEDIAN	4.72	5.03	5.01	4.34	4.42	4.82	5.21	4.52	3.96	3.38	4.71	5.22	60.05
MOSCOW	NORMAL	3.89	4.54	5.34	5.69	5.01	3.58	4.21	3.11	3.88	3.04	5.15	5.54	52.98
	MEDIAN	3.76	3.93	4.82	5.03	5.08	3.63	3.24	2.76	2.62	2.80	4.83	5.06	51.60
MOUNT PLEASANT 2 SW	NORMAL	4.29	4.42	6.01	5.10	5.69	3.49	4.78	3.61	3.77	3.52	4.94	5.30	54.97
	MEDIAN	3.95	4.18	5.22	4.63	5.04	3.52	4.37	3.48	3.19	2.91	4.39	4.68	53.14
MURFREESBORO 5 N	NORMAL	4.21	4.05	5.52	4.48	5.36	3.87	4.82	3.78	4.25	3.33	4.53	4.33	53.17
	MEDIAN	3.94	3.68	4.65	4.09	5.20	3.79	4.80	3.62	3.73	3.10	4.12	4.24	49.52
NASHVILLE ASO AP	NORMAL	3.58	3.81	4.85	4.37	4.88	3.57	3.97	3.46	3.46	2.62	4.12	4.61	47.32
	MEDIAN	3.21	3.61	4.68	3.82	4.51	2.93	3.57	3.25	2.58	2.28	3.87	4.03	47.01
NEWBERN	NORMAL	3.54	4.04	5.19	5.13	5.04	4.38	4.24	3.49	3.75	3.30	4.84	5.44	52.44
	MEDIAN	2.88	3.15	4.80	4.58	4.28	3.93	4.21	2.67	3.43	2.40	4.57	4.67	51.43
NEWCOMB	NORMAL	3.86	3.93	4.77	4.04	4.87	4.02	5.31	4.20	3.48	3.15	4.24	4.28	50.15
	MEDIAN	3.48	4.04	4.67	3.76	4.72	4.06	5.06	3.68	3.42	3.13	3.90	3.53	50.25
NEWPORT 1 NW	NORMAL	3.51	3.56	4.32	3.60	4.53	3.62	4.49	3.83	3.33	2.56	3.18	3.42	44.21
	MEDIAN	3.39	3.56	3.88	3.42	4.36	3.72	4.55	3.52	3.05	2.29	3.10	3.27	43.65
NORRIS	NORMAL	4.33	4.16	5.34	4.25	4.63	4.58	4.79	4.29	3.51	3.18	4.58	4.92	52.78
	MEDIAN	4.18	4.12	4.96	3.77	4.23	4.88	4.12	3.79	3.49	3.04	4.46	4.59	51.88
NORTH SPRINGS	NORMAL	4.46	4.44	5.79	4.45	4.96	4.36	5.01	4.18	4.26	3.32	4.64	5.53	55.40
	MEDIAN	4.30	4.28	5.08	4.60	4.60	3.85	4.95	3.46	3.68	3.04	4.58	4.95	55.44
OAK RIDGE ATDC	NORMAL	4.57	4.34	5.68	4.08	4.68	4.34	5.45	3.70	3.86	3.18	4.59	5.30	53.77
	MEDIAN	4.64	4.36	5.34	3.74	3.92	4.38	4.58	3.14	3.60	2.99	4.45	4.75	52.23
OLD HICKORY DAM	NORMAL	3.72	4.21	5.14	3.84	4.86	3.96	3.74	3.29	3.31	2.69	4.43	5.04	48.22
	MEDIAN	3.49	3.63	4.46	3.71	4.73	3.62	3.43	2.93	2.78	2.80	4.26	4.61	46.83
ONEIDA	NORMAL	4.36	4.19	5.32	4.48	5.26	4.53	5.31	4.24	3.87	3.87	4.52	4.58	54.53
	MEDIAN	4.14	4.40	5.37	4.46	5.05	4.18	5.35	4.03	3.98	3.73	4.37	4.20	53.78
ORLINDA	NORMAL	3.65	4.34	5.38	4.37	4.79	4.33	3.95	3.27	3.48	3.06	4.40	4.94	49.96
	MEDIAN	3.24	4.28	4.78	3.89	4.71	4.25	3.41	2.68	2.90	3.20	4.02	4.50	48.23
PARIS 2 NW	NORMAL	3.92	4.39	5.20	4.87	4.55	4.06	4.29	4.11	3.77	3.29	4.89	5.37	52.70
	MEDIAN	3.88	3.62	4.94	4.23	3.70	3.67	3.93	2.93	3.55	2.98	4.71	4.47	51.53
PIKEVILLE	NORMAL	4.79	4.49	5.83	4.47	4.96	3.75	4.62	3.60	3.92	3.11	4.56	5.13	53.13
	MEDIAN	4.74	4.37	5.49	4.03	4.55	3.98	4.60	3.21	3.21	3.13	4.59	4.78	51.84
PORTLAND SEWAGE PLANT	NORMAL	3.79	4.13	5.38	4.36	5.21	4.48	4.28	3.67	3.45	3.12	4.65	4.82	51.29
	MEDIAN	3.68	3.60	4.61	3.95	4.93	3.63	3.70	3.18	3.03	3.40	4.47	4.46	48.11

REFERENCE 4

Tech File
New Core File

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND STORAGE TANKS
COOKEVILLE FIELD OFFICE

Tim Stewart
DSF, NFO

BKA 3/9
File 89-504
Copy C.C.

To: File.
From: Elwin (Rocky) Hannah
Date: 1-27-94 Date of Trip: 1-25-94
Facility Name: " Red Spring"
Facility ID#: 4-899001
Weather Conditions: Cool and rainy

On January 25, 1994 Doug Brady and I went to the above referenced site located in McMinnville near Sparta Street. We were responding to an inquiry from Tim Stewart with the Division of Superfund, Nashville Field Office. We arrived at the site at approximately 1120 hours. The spring in question is located approximately 300 feet northwest of Sparta Street near its junction with Oak St. The intermittent stream which drains the valley was turbid due to the rain. The seep in question is located northeast of the main stream 40 feet and was not turbid. The seep had a very strong odor of weathered gasoline with a sweet odor associated with solvents. In addition the presence of Fe bacteria and a strong Fe buildup indicated the presence of hydrocarbons in the spring. The "Red Spring" appears to be a relatively new spring possibly a wet weather spring judging from the grass which is growing throughout the seep. Kyle Phillips with the Division of Groundwater arrived at the site at 1140 and indicated that the spring was known locally as Red Spring. At 1145 I collected water samples for VOA's, GRO, DRO, Extractables, and TPH IR (418.5). These grab samples were collected using clean disposable latex gloves. The samples were immediately placed in a cooler containing blue ice for shipment to the laboratory. Since the spring is wide and shallow it was necessary for me to enter the spring using waders. I approached the sampling point from the downstream direction so contamination which might inadvertently be on my waders could not contaminate the samples. The bottles were gently lowered into the deepest portion of the seep keeping the lip upstream to reduce the chance of any contamination from the sides of the bottle being drawn into the sample. Throughout this sampling event care was taken to insure that cross contamination did not occur. Doug Brady and Kyle Phillips were at the site during sampling.

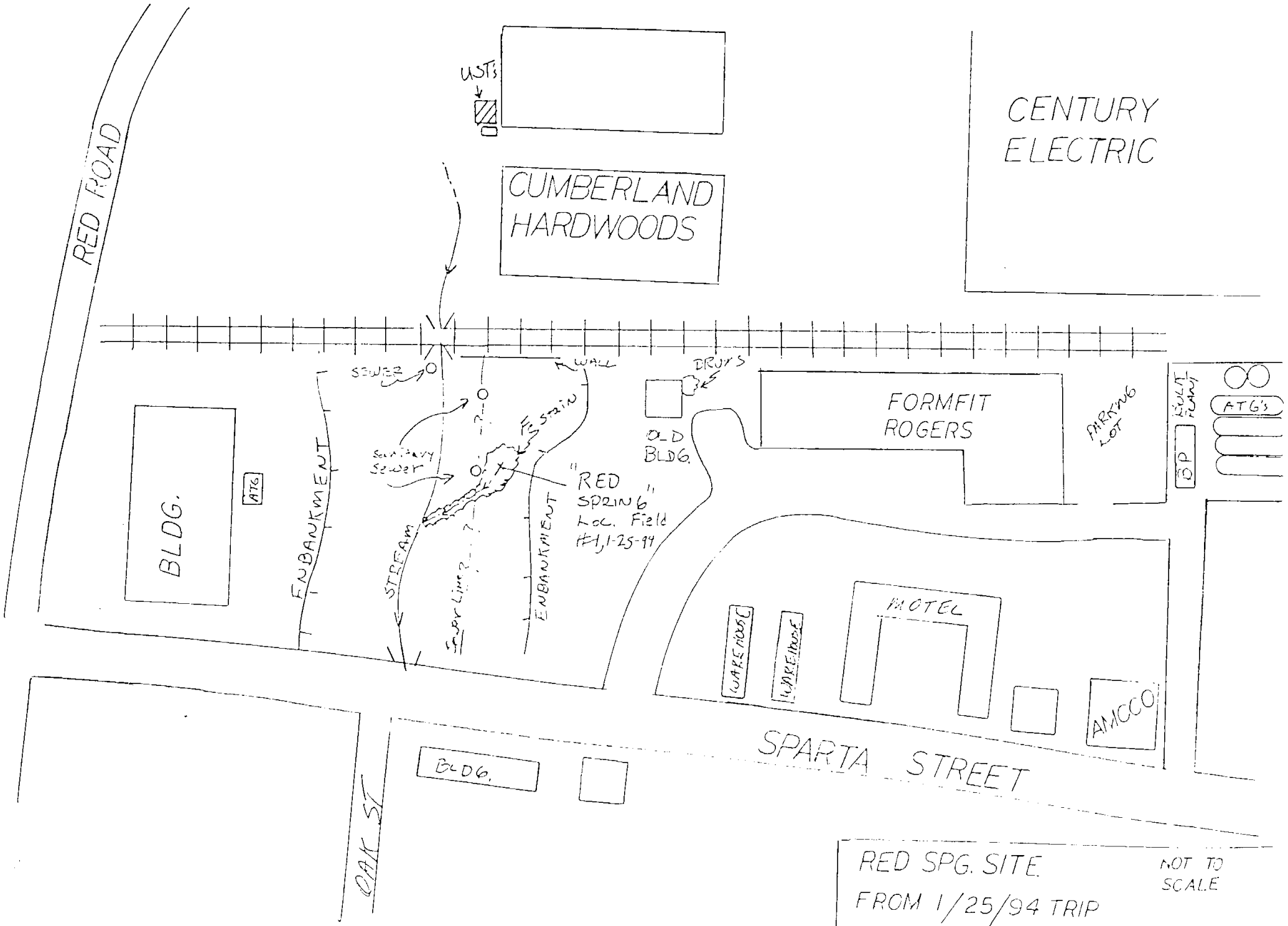
Further investigation in the vicinity of the seep revealed the following observations:

The seep may be following the city sewer which is directly adjacent to the spring. This sanitary sewer appears to be recently installed and the water may have intercepted the shallow ground water flow.

Two additional manholes are located to the northwest near the railroad. A old foundation is also located in this direction.

Several possible sources exist in the area. (1) An above ground tank is located 200 feet from the seep next to a building across the main stream. This tank may not have been in service. (2) The embankment to the northeast toward Formfit Rogers appears to consist partially of construction debris. In addition a old storage building has several drums stored in it adjacent to Formfit Rogers. (3) The Cumberland Hardwoods facility has two UST's and a dispenser island approximately 700 upgrade from the seep. (4) Century Electric is located approximately 1000 feet to the north-northwest and apparently upgrade. (5) A bulk plant with several petroleum AGT's is located about 800 feet to the north and in an upgrade direction. (6) An Amoco station is located approximately 800 feet northeast and laterally to the site.

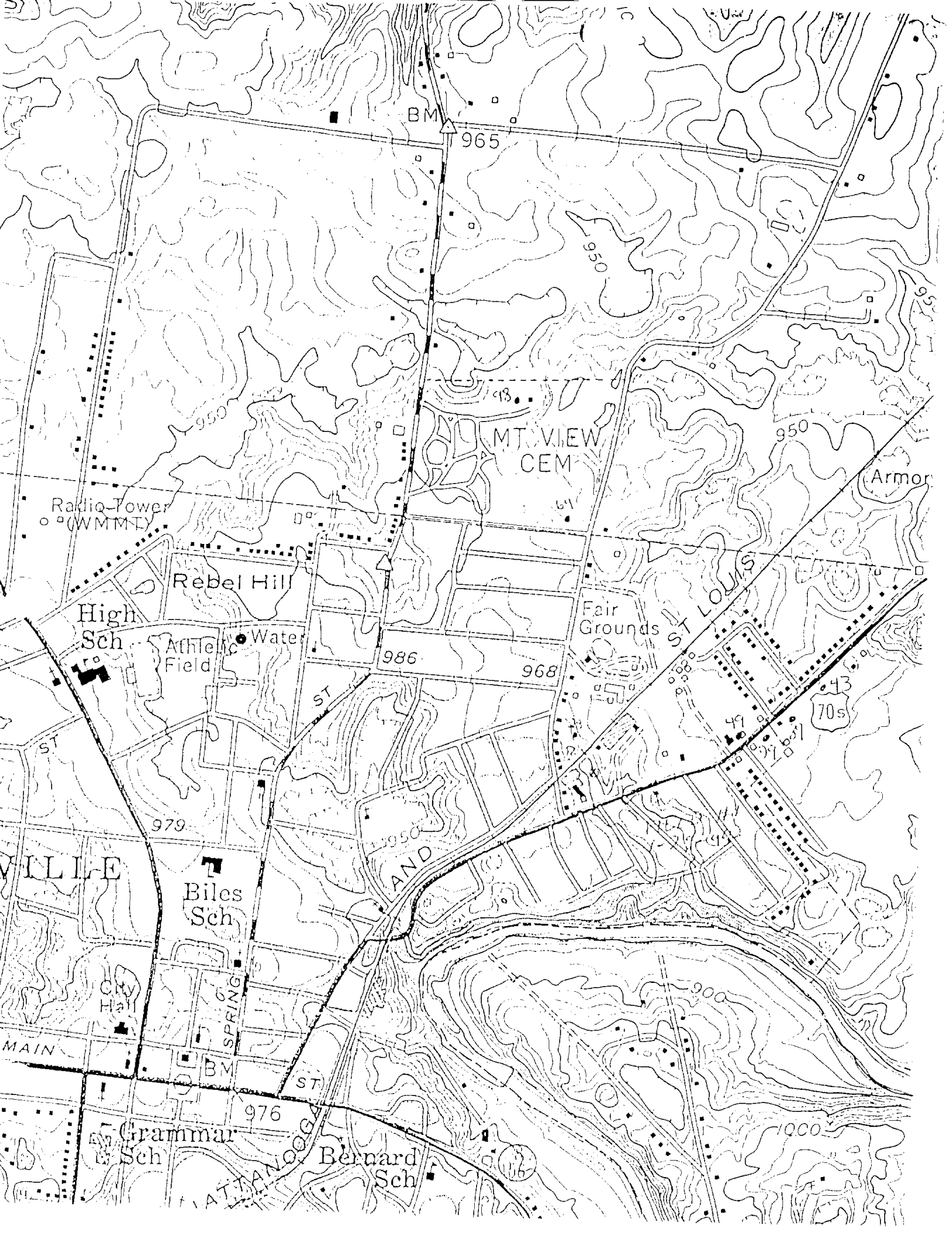
Several photographs were taken of the site by Doug Brady. A topo map and sketch are attached. We left the site at approximately 1215 hours.



RED SPG. SITE
FROM 1/25/94 TRIP

NOT TO SCALE

EDH 1/27/94


BM
965
950
MT VIEW
CEM
Radio-Power
(WMMT)
Rebel Hill
High
Sch
Athletic
Field
Water
986
968
Fair
Grounds
ST LOUIS
Armor
70s
ST
979
950
AND
Biles
Sch
City
Hall
SPRING
MAIN
BM
976
Grammar
Sch
Bernard
Sch
900
1000

STATE OF TENNESSEE - ENVIRONMENTAL LABORATORIES

Sample Source: Red SPRING
I.D./Site No.: 4-849001
County: WARREN Field No.: 1
Stream Mile: _____ Depth: _____
Collected: Date 1-25-94 Time 1145 By EDH
Contact Hazard: Hydrocarbons
Signature of sampler: Elwin Dehart
Send Report to: ELWIN HANNAH
COOKEVILLE FIELD OFFICE

Sampling Agency
__ APC __ DOT
__ DWS __ GW
__ SWM X UST
__ EEP __ PASI
__ SF __ WPC
__ other (specify): _____

Billing Code (required)
32241.08

Sample Type
__ Sediment
__ Soil
__ Tissue
X Water
__ Air
__ sludge
Other: _____

Sample Priority
__ Emergency
X Legal
X Routine
__ Ambient

Date Priority needed: _____

Field Comments: Gasoline or solvent odor

ORGANIC ANALYSIS
Base/Neutral/Acid Extractables

For lab use only
Laboratory Number: 94-01-0324
Date received: 1/27/94
Time received: 1240 by: BA
Date reported: _____ by: _____
Reviewed by: _____

	*	Base/Neutral
34292		butylbenzylphthalate
39100		bis(2-ethylhexyl)phthalate
39110		di-n-butylphthalate
34596		di-n-octylphthalate
34336		diethylphthalate
34341		dimethylphthalate
34438		n-nitrosodimethylamine
34433		n-nitrosodiphenylamine
34428		n-nitroso di-n-propylamine
34408		isophorone
34447		nitrobenzene
34611		2,4-dinitrotoluene
34626		2,6-dinitrotoluene
34205		acenaphthene
34200		acenaphthylene
34220		anthracene
34526		benzo(a)anthracene
34247		benzo(a)pyrene
34230		benzo(b)fluoranthene
34521		benzo(ghi)perylene
34242		benzo(k)fluoranthene
34320		chrysene
34556		dibenzo(a,h)anthracene
34376		fluoranthene
34381		fluorene
34403		indeno(1,2,3-cd)pyrene
34696		naphthalene
34461		phenanthrene
34469		pyrene

	*	Base/Neutral
34273		bis(2-chloroethyl) ether
34278		bis(2-chloroethoxy)methane
34283		bis(2-chloroisopropyl) ether
34636		4-bromophenylphenyl ether
34641		4-chlorophenylphenyl ether
34386		hexachlorocyclopentadiene
34391		hexachlorobutadiene
39700		hexachlorobenzene
34396		hexachloroethane
34551		1,2,4-trichlorobenzene
34581		2-chloronaphthalene
39330		aldrin
39337		a-BHC
39338		b-BHC
34259		d-BHC
39340		g-BHC (lindane)
39350		chlordane
38310		4,4'-DDD
39320		4,4'-DDE
39300		4,4'-DDT
39380		dieldrin
34361		endosulfan I
34356		endosulfan II
34351		endosulfan sulfate
39390		endrin
34366		endrin aldehyde
39410		heptachlor
39420		heptachlor epoxide
39400		toxaphene

	*	Base/Neutral
39480		methoxychlor
		PCB-1016/1242
39488		PCB-1221
39492		PCB-1232
39500		PCB-1248
39504		PCB-1254
39508		PCB-1260
81649		PCB-1262

	*	Acid Extractable
34552		4-chloro-3-methyl phenol
34586		2-chlorophenol
34601		2,4-dichlorophenol
34606		2,4-dimethylphenol
24616		2,4-dinitrophenol
34657		2-methyl-4,6-dinitrophenol
34591		2-nitrophenol
34646		4-nitrophenol
39032		pentachlorophenol
34694		phenol
34681		2,4,6-trichlorophenol

	*	Herbicides

	*	Other

* please check desired parameter

Lab Comments: _____

RDA 1527

PH-3014 (REV. 1-93)

STATE OF [T]NESSEE - ENVIRONMENTAL LABORATORIES

ORGANIC ANALYS[IS]
Purgeables and Petroleum [Hyd]rocarbons

Sample Source: Red Spring
I.D./Site No.: 4-899001
County: Warren Field No.: 1
Stream Mile: ____ Depth: ____
Collected: Date 1-25-94 Time 1145 By EDH
Contact Hazard: Hydrocarbons
Signature of sampler: [signature]
Send Report to: ELWIN HANNAH
COOKEVILLE FIELD OFFICE

Sampling Agency: __ APC __ DOT __ DWS __ GW __ SWM X UST __ EEP __ PASI __ SF __ WPC __ other (specify):

Billing Code (required): 327141.08

Sample Type: __ Soil __ Sediment X Water __ Other

Sample Priority: __ Emergency X Legal X Routine __ Ambient
Date Priority needed:

Field Comments: Gasoline or solvent Odor

For lab use only
Laboratory Number: 94-01-0324
Date received: 1/27/94
Time received: 1240 by [initials]
Date reported: ____ by ____
Reviewed by: ____

	*	Halogenated
32104	↑	bromoform
32101		bromodichloromethane
34413		bromomethane
32102		carbon tetrachloride
34301		chlorobenzene
34311		chloroethane
34576		2-chloroethylvinyl ether
32106		chloroform
34418		chloromethane
32105		dibromochloromethane
34536		1,2-dichlorobenzene
34566		1,3-dichlorobenzene
34571		1,4-dichlorobenzene
34668		dichlorodifluoromethane
34496		1,1-dichloroethane
34531		1,2-dichloroethane
34501		1,1-dichloroethene
		cis-1,2-dichloroethene
34546		trans-1,2-dichloroethene
34541		1,2-dichloropropane
34045		cis-1,3-dichloropropene
34699		trans-1,3-dichloropropene
34423		methylene chloride
34516	↓	1,1,2,2-tetrachloroethane

	*	Halogenated
34475	↑	tetrachloroethene
34506		1,1,1-trichloroethane
34511		1,1,2-trichloroethane
39180		trichloroethene
39488		trichlorofluoromethane
39715	↓	vinyl chloride

	*	Aromatic
34030	↑	benzene
34301		chlorobenzene
34371		ethylbenzene
34010		toluene
		o-xylene
		m-xylene
	↓	p-xylene

Other

*	Petroleum Hydrocarbons
X	Gasoline Range Organics
X	Diesel Range Organics
X	IR - 418.1

Additives:

*	
X	Methyl tert-butyl ether
X	diisopropyl ether

* please check desired parameters

This site is near a SSF site (Century Electric) — mainly contaminated with TCE + other solvents — Smell is like weathered gas — chlorinated smell.

1 vial broken by lab — only 4 VIALS for analyses

Lab Comments: ____

PH-3013 LAB (rev. 8/92) RDA NO. 1527

STATE OF TENNESSEE
ENVIRONMENTAL LABORATORIES
ORGANIC ANALYSIS,EXTRACTABLES

Sample Type: WATER
Sample Site Code: 4-899001
Sample Source: RED SPRINGS
County: 89
Field No: 1
Collected-Date 01/25/94 Time 11:45 By EDH
Date Priority Needed / /

Laboratory Number 94-01-0324
Branch Lab Number
Received-Date 01/27/94 Time 08:00 By GAM
Sampling Agency: UST/08
Sample Priority:
Emergency[N]Legal[Y]Routine[N]Ambient[N]

CODE	BASE/NEUTRAL EXTRACTABLES	VALUE @
34292	BUTYLBENZYL PHTHALATE	
39100	BIS(2-ETHYLHEXYL)PHTHALATE	
39110	DI-N-BUTYL PHTHALATE	
34596	DI-N-OCTYL PHTHALATE	
34336	DIETHYL PHTHALATE	
34341	DIMETHYL PHTHALATE	
34438	N-NITROSODIMETHYLAMINE	
34433	N-NITROSODIPHENYLAMINE	
34428	N-NITROSO DI-N-PROPYLAMINE	
34408	ISOPHORONE	
34447	NITROBENZENE	
34611	2,4-DINITROTOLUENE	
3[illegible]	6-DINITROTOLUENE	
34[illegible]	ENAPHTHENE	
34200	ACENAPHTHYLENE	
34220	ANTHRACENE	
34526	BENZO(a)ANTHRACENE	
34247	BENZO(a)PYRENE	
34230	BENZO(b)FLUORANTHENE	
34521	BENZO(ghi)PERYLENE	
34242	BENZO(k)FLUORANTHENE	
34556	DIBENZO(a,h)ANTHRACENE	
34376	FLUORANTHENE	
34381	FLUORENE	
34403	INDENO(1,2,3-cd)PYRENE	
34696	NAPHTHALENE	
34461	PHENANTHRENE	
34469	PYRENE	
34320	CHRYSENE	
34273	BIS(2-CHLOROETHYL)ETHER	
34278	BIS(2-CHLOROETHOXY)METHANE	
34283	BIS(2-CHLOROISOPROPYL)ETHER	

CODE	BASE/NEUTRAL EXTRACTABLES	VALUE @
34636	4-BROMOPHENYLPHENYL ETHER	
34641	4-CHLOROPHENYLPHENYL ETHER	
34386	HEXACHLOROCYCLOPENTADIENE	
34391	HEXACHLOROBUTADIENE	
39700	HEXACHLOROBENZENE	
34396	HEXACHLOROETHANE	
34551	1,2,4-TRICHLOROBENZENE	
34581	2-CHLORONAPHTHALENE	
39330	ALDRIN	
39337	ALPHA BHC	
39338	BETA BHC	
34259	DELTA BHC	
39340	GAMMA BHC(LINDANE)	
39350	CHLORDANE	
38310	4,4 DDD	
39320	4,4 DDE	
39300	4,4 DDT	
39380	DIELDRIN	
34361	ENDOSULFAN I	
34356	ENDOSULFAN II	
34351	ENDOSULFAN SULFATE	
39390	ENDRIN	
34366	ENDRIN ALDEHYDE	
39410	HEPTACHLOR	
39420	HEPTACHLOR EPOXIDE	
39400	TOXAPHENE	
39480	METHOXYCHLOR	
	PCB 1016/1242	U<2.5
39488	PCB 1221	U<3.4
39492	PCB 1232	U<3.1
39500	PCB 1248	U<2.5
39504	PCB 1254	U<1.3

CODE	BASE/NEUTRAL EXTACTABLES	VALUE @
39508	PCB 1260	U<1.1
81649	PCB 1262	U<1.1

CODE	ACID EXTRACTABLES	VALUE @
34552	4-CHLORO-3-METHYL PHENOL	
34586	2-CHLOROPHENOL	
34601	2,4-DICHLOROPHENOL	
34606	2,4-DIMETHYLPHENOL	
34616	2,4-DINITROPHENOL	
34657	2-METHYL-4,6-DINITROPHENOL	
34591	2-NITROPHENOL	
34646	4-NITROPHENOL	
39032	PENTACHLOROPHENOL	
34694	PHENOL	
34681	2,4,6-TRICHLOROPHENOL	

OTHERS

Reporting Units, unless otherwise noted:
water, ug/l; sediment,ug/kg;fish,ug/kg

Unit supervisor [signature]
Date 2-11-94

Completed-Date:02/02/94 Time: By:SBU

Signature of supervisor indicates that the work was performed in accordance with federally approved procedures where available and in compliance with current quality assurance criteria except as qualified.

Comments::U-UNDETECTED. D-DETECTED. THIS VALUE IS THE SAMPLE QUANTITATION LIMIT.

PH-3016LAB(REV 5/90)

STATE OF TENNESSEE
ENVIRONMENTAL LABORATORIES
PETROLEUM HYDROCARBON ANALYSIS

Sample Priority:
Emergency[N]Legal[Y]Routine[Y]Ambient[N]

Sample Type: WATER
Sample Site Code: 4-899001
Sample Source: RED SPRING
County: 99
Field No. 1
Collected-Date 01/25/94 Time 11:45 By EDM
Date Priority Needed / /

Laboratory Number 94-01-0324
Branch Lab Number
Received-Date 01/27/94 Time 12:40 By GAM
Sampling Agency: DSI/C8

CODE	AROMATIC PURGEABLES	VALUE @
34030	BENZENE	21.2
34301	CHLOROBENZENE	
34536	1,2-DICHLOROBENZENE	
34566	1,3-DICHLOROBENZENE	
34571	1,4-DICHLOROBENZENE	
34371	ETHYL BENZENE	17.1
34010	TOLUENE	16.4
	O-XYLENE	14.2
	M-XYLENE & P-XYLENE	27.5

TOTAL PETROLEUM HYDROCARBONS	VALUE @
VOLATILE PET. HYDROCARBONS	390
EXTRACTABLE PET. HYDROCARBONS	DC100

	OTHER PURGEABLES	
	M t-BE	ND
	d-IPE	ND
	1,1-DICHLOROETHANE	6.5
	1,1-DICHLOROETHENE	12.7
	TRICHLOROETHENE	3.3
	TPH BY IR	160

Completed-Date 02/17/94 By AB

Unit Supervisor: Ruby L. Gattay
Date: 2-24-94
Signature of supervisor indicates that the work was performed in accordance with federally approved procedures where available and in compliance with current quality assurance criteria, except as qualified.
Comments:

@ Reporting units, unless otherwise noted:
water, ug/L; sediment, ug/kg

CHAIN OF CUSTODY AND SUPPLEMENTAL INFORMATION

Note for samplers: Only one chain of custody form is required per sample set or site (if all collected at the same time).

Sample Custody

1.	Collected by	Glenn D Hunt.	Date 1-25-94 eat	time 1145
	Delivered to	Gloria A Mickle	Date 1-27-94	time 1240
2.	Received by		Date	time
	Delivered to		Date	time
3.	Received by		Date	time
	Delivered to		Date	time
4.	Received by		Date	time
	Delivered to		Date	time
5.	Received in Lab by	Gloria A Mickle	Date 1/27/94	time 1240
6.	Logged in by	Gloria A Mickle	Date 1/27/94	time 1240

Additional information

7. Nearest town or city McMinnville

8. Names of others present at time sample collected Kyle Phillips, Doug Brady

9. Approximate volume of sample (5) 40ML vials, (2) 1 LITER DRO, (2) 1 LITER EXTRACTABLE (2) 1 liter IR

10. Number of other samples collected at same time at this point _____

11. Describe field collection procedure and special handling or preservation of this sample

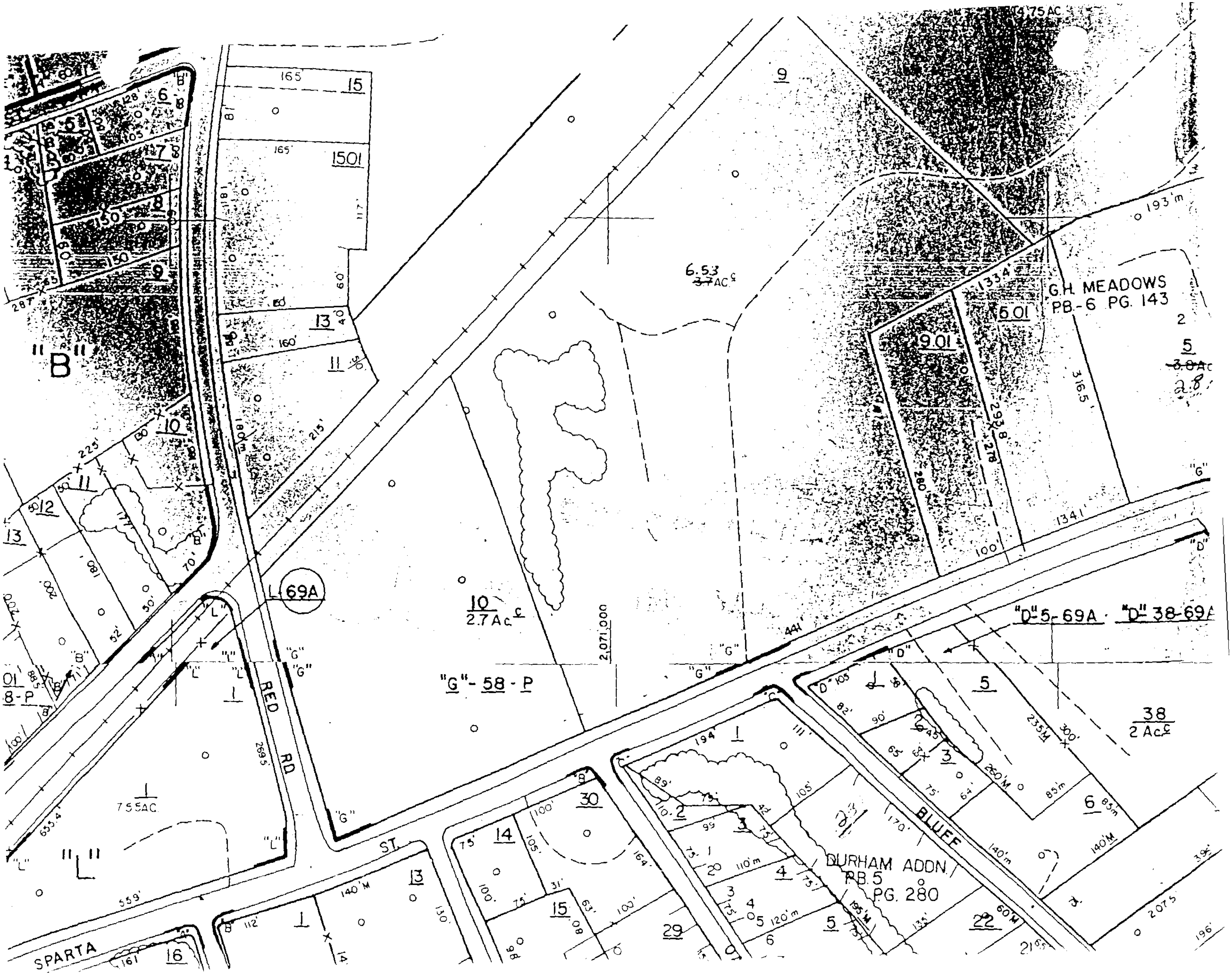
EAG GRAB PROTOCOL

12. Describe how sample transported to laboratory SITE AUTO ON ICE

13. Sample sealed by _____ Date sample sealed _____

14. Remarks _____

REFERENCE 5


G.H. MEADOWS
PB-6 PG. 143
DURHAM ADDN.
PB.5
PG. 280
RED RD
SPARTA
ST.
BLUFF
L-69A
"G"-58-P
"D"5-69A · "D"38-69A
"B"
"L"
10
2.7 Ac
6.53 AC
7.55AC
38
2 Ac
2,071,000

REFERENCE 6

SKA 3/24
Warren Co. Gen. file

TRIP REPORT

Owner/Facility : Cumberland Lumber Company

Type of Facility : Lumber

County : Warren **City :** McMinnville **Date :** 3/23/94

Purpose of Visit : Investigate contamination at Red Springs

Individuals Contacted : None

Other DSF Personnel Present : None

Weather Conditions : Clear, sunny, temperature in the 60's and 70's

Samples taken : no **Photos Taken :** Yes

Comments : I investigated the potential sources of contamination at Red Springs. The adjacent buildings and the property are owned by Cumberland Lumber Company. I noticed eight drums on the north side of the building. Two of the drums have unattached lids, two are bulging, and the rest are in poor condition. One empty drum is at the culvert under the railroad tracks. A noticable sheen and strong solvent odor eminate from Red Springs. A generator, several surplus U. S. Army trailers, a storage tank, and various other pieces of equipment litter the facility. One drum is on the second floor walkway. The windows of the buildings are covered by plywood. Trapper's Automotive is located just upstream of the facility but does not have an underground storage tank. Just upstream from Trapper's is a refridgeration company and Davis Sign Company. Overlooking these facilties is the Cumberland Lumber Company main plant. To the east is an old warehouse building owned by Harris and Harris Sales Company and Formfit Rogers. Downstream of the springs is a residential area.

Vehicle : S5-DR35 **Mileage:** 187 miles (charged to Century Electric)

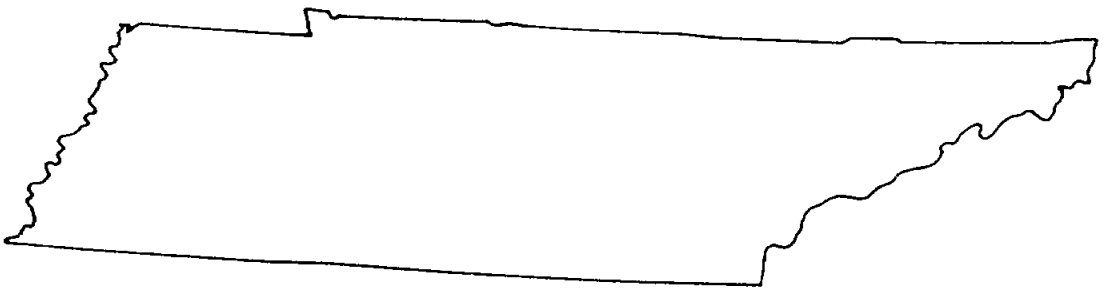
Report by : William T. Stewart **Date: 3/24/94**

Signature : William T. Stewart

xc: Central Office

REFERENCE 7

Water Resources Data
Tennessee
Water Year 1990



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TN-90-1
Prepared in cooperation with the State of Tennessee
and with other agencies

03421000 COLLINS RIVER NEAR MCMINNVILLE, TN

LOCATION.--Lat 35°42'32", long 85°43'46", Warren County, Hydrologic Unit 05130107, on left bank at downstream side of bridge on U.S. Highway 70S, 1.8 mi downstream from Barren Fork River, 2.5 mi northeast of McMinnville, and at mile 19.5.

DRAINAGE AREA.--640 mi^2.

PERIOD OF RECORD.--October 1924 to current year. Prior to April 1925 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 873: 1929, 1932(M), 1934-35, 1936(M), 1937. WSP 1276: 1925-26, 1928(M), 1933, 1936, 1940. WSP 2110: Drainage area.

GAGE.--Water-stage encoder. Datum of gage is 825.78 ft, Sandy Hook datum. Prior to Oct. 16, 1926, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--No estimated daily discharges. Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--66 years, 1,157 ft^3/s, 24.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,300 ft^3/s, Mar. 23, 1929, gage height, 39.1 ft, from rating curve extended above 42,000 ft^3/s on basis of slope-area measurement of peak flow; minimum, 35 ft^3/s, Sept. 21, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1854 is believed to have been about equal to that of Mar. 23, 1929, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft^3/s and maximum (*):

Date	Time	(ft^3/s)	(ft)	Date	Time	(ft^3/s)	(ft)
Oct. 2	1200	15,700	17.75	Feb. 10	2130	15,000	17.27
Feb. 4	1330	*18,300	*19.52				

Minimum discharge, 89 ft^3/s, Sept. 7, 8, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9810	317	899	5620	2980	1230	1100	1020	464	187	154	103
2	14100	313	835	3580	2450	1450	1080	1570	430	194	147	102
3	7390	307	778	2610	4350	3080	1010	1620	422	191	142	100
4	3890	299	717	2710	16300	3060	940	1430	623	180	138	97
5	2630	290	680	3590	10600	2430	886	4280	871	175	143	94
6	1930	330	652	3100	5380	1980	893	3260	640	178	145	92
7	1500	548	619	2840	3670	1690	1170	2260	538	182	139	91
8	1220	706	673	3280	2950	1540	1120	1670	469	176	179	90
9	1020	1330	945	4140	2490	2110	885	1340	410	189	161	90
10	891	1230	910	3250	9930	3100	950	1280	369	190	154	93
11	793	952	842	2520	10300	3040	1010	1500	338	227	143	97
12	715	789	818	2080	5170	2430	1020	1340	312	799	136	163
13	649	693	834	1730	3500	1990	921	1150	295	735	136	184
14	598	646	814	1480	2770	1730	867	988	283	1030	130	131
15	553	787	771	1340	2370	1550	842	852	274	994	125	121
16	516	3610	735	1220	5550	5030	814	756	268	629	121	118
17	583	3240	681	1120	6720	8860	779	994	259	456	119	108
18	589	2330	639	1760	4370	6260	746	1260	255	370	115	100
19	560	1750	645	2000	3300	3980	718	922	251	349	114	98
20	534	1410	669	2410	2720	2900	678	807	241	277	113	97
21	497	1220	647	7020	2240	2260	1450	868	244	260	109	104
22	467	1180	586	5170	2010	1880	3710	950	242	344	110	203
23	440	3100	507	3490	2170	1620	2650	890	235	434	110	190
24	415	2830	499	2680	2040	1430	1960	791	231	392	110	212
25	394	2160	465	2380	1780	1290	1540	708	234	309	108	168
26	377	1740	466	2110	1550	1170	1280	647	217	254	107	137
27	361	1460	467	1800	1410	1080	1100	730	205	219	107	122
28	348	1320	463	1590	1310	1000	1020	698	199	198	105	112
29	338	1200	454	3070	---	986	1110	646	194	182	103	105
30	330	1010	588	6250	---	1100	1120	585	186	170	105	101
31	327	---	3520	4050	---	1140	---	516	---	160	106	---
TOTAL	54765	39097	23818	91990	122380	74396	35469	38328	10199	10630	3934	3623
MEAN	1767	1303	768	2967	4371	2400	1182	1236	340	343	127	121
MAX	14100	3610	3520	7020	16300	8860	3710	4280	871	1030	179	212
MIN	327	290	454	1120	1310	986	678	516	186	160	103	90
CFSM	2.76	2.04	1.20	4.64	6.83	3.75	1.85	1.93	.53	.54	.20	.19
IN.	3.18	2.27	1.38	5.35	7.11	4.32	2.06	2.23	.59	.62	.23	.21

CAL YR 1989 TOTAL 709922 MEAN 1945 MAX 19400 MIN 234 CFSM 3.04 IN. 41.26
WTR YR 1990 TOTAL 508629 MEAN 1394 MAX 16300 MIN 90 CFSM 2.18 IN. 29.56

REFERENCE 8

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

OFFICE CORRESPONDENCE

FROM	TO	DATE

DATE: July 21, 1986

TO: Files

FROM: Gordon S. Caruthers

SUBJECT: Warren County Demographic Survey

On March 25 and 26, 1986, Charles R. Rush and Gordon S. Caruthers of the Tennessee Division of Superfund conducted a demographic survey of the McMinnville, Tennessee area in connection with the investigation of Superfund sites at Century Electric and Sunbeam/Oster Manufacturing Co. This survey concerned uses of surface and ground water in the vicinity of the referenced sites, population patterns in the area and ownership of the sites.

The following information was obtained from interviews with public officials and private citizens:

Mr. Dwaine Johnston, Warren County Soil Conservation Officer, advised that there was no use of water from the Barren Fork or Collins River for irrigation purposes so far as he knew. He also stated that there were no commercial feed lots or dairies in the area of concern.

Mr. Woodrow Young,Warren County Environmental agent, estimated that approximately 100 or less homes in the entire county were still served by private water wells. The areas within and immediately outside McMinnville are served by the city water supply and the remaining portion of the area is served by a county utility district.

Personnel from the city water department and the Warren County Utility District confirmed that all portions of the area of concern were served by public water. The water for the city system is drawn from the Barren Fork upstream from both of the referenced sites, and thewater for the county system is drawn from the Collins river about 200 meters upstream from its confluence with the Barren Fork. Although tis intake is downstream from both sites, it would not appear to be at risk due to its location upstream from theconfluence unless a reverse flow occurred on the Collins River. This situation would appear quite unlikely. Both the city and county intakes are within three miles of either referenced site.

FROM	DATE

TO

An attempt to contact the Wildlife Resources officer for Warren County was unsuccessful; however, the Collins River and Barren Fork are included in the coolwater stream inventory compiled by the Tennessee Division of Water Quality Control, indicating a significant fishery for coolwater species such as smallmouth bass. In addition, the Collins River is designated a pastoral river under the Tennessee Senic Rivers Program

The McMinnville City water department services approximately 5000 customers, based on February, 1986 billing. The Warren County Utility District supplies approximately 4000 customers, also based on February 1986 billing

Inquiry at the Warren County Tax Assessors office revealed that the Sunbeam/ Oster site is owned by Warren County and is listed as parcel 040.01, Map 058. The Century Electric site is owned by the City of McMinnville and is listed as parcel 017.00, Map 058.

Roads in the three-mile radius area from both sites were surveyed and residents of all neighborhoods were asked about water use Six houses in the area of concern were determined to use private wells for domestic water supply. These residences are as follows:

Otto Cartwright
Rt. 9
McMinnville, Tennessee

Claude Hale
Rt. 5
Faulkner Spring Road
McMinnville, Tennessee

Ophie Graham
Rt. 5
Bluff Springs Road
McMinnville, Tennessee

Lila Haggard
Rt. 5, Box 431
McMinnville, Tennessee

Carl Morton
Rt. 5
Faulkner Spring Road
McMinnville, Tennessee

Allen Green
Francis Ferry Road
exact address unknown
unable to find at home but
known to be on well water

Locations of these residences are marked on maps in SIU files.

GSC/dq

REFERENCE 9

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

OFFICE CORRESPONDENCE

DATE: March 24, 1995

TO: John Kiser, Nashville Field Office

FROM: John T. Weakley JTW

SUBJECT: GEMS Data for Cumberland Lumber Co.

MENU: LATITUDE/LONGITUDE: (ddmmss)

ref	parmname	parameter description	parameter value	index
1.	LATITUDE	Latitude in DDMMSS	354115	
2.	LNGITUDE	Longitude in DDMMSS	854545	
3.	SITENAME	Name of a study site	Cumberland Lumber Co.	
4.	STATE	State Identifier	TN	
5.	YEAR	Year of the census	1990	
6.	TYPE	Type of census data	POP	
7.	STANRING	Use standard ring distance	no	
8.	SECTORS	Number of Sectors	1	

CENSUS DATA
Cumberland Lumber Co.
LATITUDE 35:41:15 LONGITUDE 85:45:45 1990 POPULATION

SECTOR							
KM	0.00-.400	.400-.800	.800-1.60	1.60-3.20	3.20-4.80	4.80-6.40	TOTALS
S 1	1164	1214	2077	7773	3687	978	16893
RING	1164	1214	2077	7773	3687	978	16893
TOTALS							

MENU: LATITUDE/LONGITUDE: (ddmmss)

ref	parmname	parameter description	parameter value	index
1.	LATITUDE	Latitude in DDMMSS	354115	
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3.	SITENAME	Name of a study site	Cumberland Lumber Co.	
4.	STATE	State Identifier	TN	
5.	YEAR	Year of the census	1995	
6.	TYPE	Type of census data	POP	
7.	STANRING	Use standard ring distance	no	
8.	SECTORS	Number of Sectors	1	

CENSUS DATA
Cumberland Lumber Co.
LATITUDE 35:41:15 LONGITUDE 85:45:45 1995 POPULATION

SECTOR							
KM	0.00-.400	.400-.800	.800-1.60	1.60-3.20	3.20-4.80	4.80-6.40	TOTALS
S 1	1182	1232	2110	7893	3770	1006	17193
RING	1182	1232	2110	7893	3770	1006	17193
TOTALS							

REFERENCE 10

File 89-504

KARST STUDY
OF
THE CENTURY ELECTRIC SITE
MCMINNVILLE, TENNESSEE

INTERIM REPORT

MARCH 1994

Prepared for

The Tennessee Department of Environment and Conservation

Division of Superfund

Prepared by

empe inc.
consulting engineers and environmental scientists
PLAZA 1, SUITE 410 220 ATHENS WAY NASHVILLE, TENNESSEE 37228

REFERENCE 11

SOILS AND GROUNDWATER INVESTIGATIONS AT THE CENTURY ELECTRIC, INC. PLANT McMINNVILLE, TENNESSEE

Prepared By:

Michael O. Smith, Project Engineer
Michael R. Groves, Hydrogeologist
Jeffrey L. Pintenich, P.E., Project Manager
James H. Clarke, Ph.D., Principal-in-Charge

AWARE, Inc.
201 Summit View Drive, Suite 300
Brentwood, Tennessee 37027

June 1984

REFERENCE 12

NAS 11/8
JCH 11/17
AER 11/15

ID # 2509

COMPLAINT INVESTIGATION
DIVISION OF WATER POLLUTION CONTROL
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

COUNTY Warren TOWN McMinnville

STREAM

DRAINAGE

POLLUTANT Industrial

POLLUTION SOURCE
NAME Hillis Trucking Company
ADDRESS 104 Gulf Street McMinnville TN 37110
PHONE

DATE OF COMPLAINT 31 Oct 1994 RECEIVED BY ~~J. Hoffland~~ Tim Stewart

COMPLAINT FROM Carl Duke PHONE

COMPLAINING ABOUT Truckwashing - oil deposits in ditch - Wastewater washing into neighboring yards -

LOCATION Sparta Street near King Street [Unmarked street Gulf Street west of King St. has Hillis sign]
Carl Duke lives in next to last house on King Street (121 King Street)

DATE OF INVESTIGATION 1 Nov 1994 BY D. Irvine

PHOTOS TAKEN: YES ___ NO ✓ TOPO NO ___ SAMPLES COLLECTED: YES ___ NO ✓

REPORT & RECOMMENDATIONS Met with Mr James Tittsworth - Manager - He showed me around the premises - showed me a truck washing station which he said was built a little over a year ago - It consisted of a concrete pad with a sump and roof - Washwater drains to sump - Mud settles to bottom of sump, and "supernatant" drains to City sanitary sewer system - Mr T. emphasized that the sump does not go to a storm drain but is connected to a City sewer - He pointed out where they had filled a low place at last residence with soil - Says storm water runoff from Sparta Street flows across Hillis's site + into back yards of adjacent residences on east side of Hillis - These residences are in a low area - A storm drain is located between two residences - Culvert + grating look small - and culvert Mr T. says water will pond in these backyards in a heavy rain - Says Hillis Co. wants to be a "good neighbor" but does not know what else they can do -

DATE COMPLAINANT NOTIFIED OF FINDINGS No phone no. STATUS No Problem

POLLUTANT CHOICES
SEWAGE
OIL
INDUSTRIAL
ANIMAL WASTE
GARBAGE
ODOR
NONPOINT
OTHER
UNKNOWN

STATUS CHOICES
PENDING
~~RESOLVED~~
NO PROBLEM
~~NOVC SENT, TO BE SENT~~
REFERRED TO(E.G. SWM,DWS)
INSPECTION SCHEDULED
FOLLOWUP NEEDED

No evidence of oil spillage was seen on Hillis site or in adjacent back yards - Spillage/runoff from the truck washing station appears unlikely - Storm water drainage does look like a problem for the residences located between King Street & Hillis Trucking Co.

8 Nov. Storm drainage problem discussed with Mr Bill Brock, public works director, 473-2553. He said he was not aware of the drainage problem, but that he would call Mr & Mrs Dake and look into the matter.

COMPLAINT INVESTIGATION

DIVISION OF WATER SUPPLY ____
DIVISION OF WATER POLLUTION CONTROL ✓
TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

JEH
BHR
NAS 4/24
AER 4/24
[redacted] 7/1

COUNTY Warren DRAINAGE BASIN Barren Fork River

TOWN Mc Minnville STREAM

FACILITY Hillis Trucking Company 104 Gulf Drive, off Sparta Rd.
Pollutant Industrial Stanley Hillis McMinnville 37110

DATE OF COMPLAINT 4/24/91 TELEPHONE 473-4580

COMPLAINT FROM Todd Hutchins Warren Co. H.D.
referring for Carl F. & Mildred Duke & other residents

COMPLAINING ABOUT company washes trucks on site, wastewater runs into yards of adjoining homes & pools
- Todd Hutchins has checked this, there is a serious problem, wastewater stands in low area of yards

INVESTIGATION 5/9/91 BY AER

PHOTOS TAKEN: YES ____ NO ✓ SAMPLES COLLECTED: YES ____ NO ✓

REPORT & RECOMMENDATIONS 5/7/91 - I talked to Mrs. Duke by phone. She stated that the trucking company was washing trucks on the property causing wastewater to flow into adjoining yards. Oil is dumped on the ground, seeps in and runs off the property. Gravel has been banked up & causes water to flood adjoining neighborhood. A pipe runs out of one of their buildings discharging wastewater. A wall has been built on the trucking company property & causes storm water to back up & flood their yard. I advised Mrs. Duke to contact the City about the storm drainage problems. I explained to her that we could take action to stop the wastewater and oil discharge but that the storm drainage system (size of chains & routing of water) were not regulated under the Act. I informed her that an NPDES

COMPLAINANT NOTIFIED OF FINDINGS 6/6/91

discharge was found when we investigated.

4/ - I contacted Mr. James Tittsworth, an employee of A-1 Trucking, and we checked the site. He stated that approx. trucks per week are washed at a concrete pad built for the purpose. He stated that there was a culvert off the corner of the pad that carried the water to an open ditch of the storm drainage system. There was a small depression with pooled water & mud, but I could not see any culvert visible (clogged). There was no evidence of wastewater exiting where the culvert enters the ditch. Muddy water appears to have run off the pad & pooled in adjoining yard. The open ditch carries stormwater from two directions to a concrete channel & small storm drain grill between two houses. The grill looks too small to carry drainage for this large an area, grill is narrow & would be easily blocked by small debris. I saw no evidence of oil runoff in the drainageways.

Waste oil is stored in closed drums and there was no heavy staining or signs of significant spillage. An oil disposal service does pickups 2/month.

An aboveground fuel tank & gas pump are located adjacent to the truck washing area. The storage tank has only gravel berm around base to hold it place, no containment. I found no evidence of a discharge pipe from any of the buildings.

5/14/91 - Talked with Mr. Hillis by phone and discussed the problems. He stated that he may be moving to a new location within 6 months. I advised him that truck washing could not continue at the site if sewer connection was not made. Mr. Hillis stated that he would explore both possibilities. He plans to build dyke/containment at new location to catch any spillage from the storage tank. I advised him that containment would be necessary at any location. Recommended they simply take the trucks to a commercial car wash for cleaning. I forwarded a copy of Federal regulations and spill cleanup information to Mr. Hillis.

NONC sent 6/27/91

JSJ 7/1
AGR 7/2
BMR 7/5
SJF 7/8

TENNESSEE DEPARTMENT OF CONSERVATION

Nashville Environmental Field Office
537 Brick Church Park Drive
Nashville, TN 37243-1550

CERTIFIED MAIL

June 27, 1991

Mr. Stanley Willis
Willis Trucking Company
104 Gulf Street
McMinnville, TN 37110

Re: Notice of Non-Compliance
Willis Trucking Company
Complaint Investigation - Illegal Discharge
Warren County

ar Mr. Willis:

On May 9, 1991, Division personnel contacted Mr. James Tittsworth of your company and investigated reports of wastewater and oil discharge from your facility.

Waste oil was found to be stored in closed drums, and there was no evidence of significant problems of either spillage or runoff. The waste oil is picked up by an oil disposal service approximately twice each month.

The storm drain system serving your facility and the adjoining residential neighborhood was installed by and is the responsibility of the City of McMinnville. If this system is not adequate to handle rain runoff for the area, the City should be advised so that plans can be made to correct the drainage problems.

Company personnel stated that transport trucks and trailers are washed on the site at a rate of approximately ten per week. A concrete pad has been installed for the purpose of washing these trucks. Wastewater from the truck washing enters the storm drainage system.

This discharge of wastewater is a violation of the Tennessee Water Quality Control Act (T.C.A. 69-3-101 et. seq.) and must be eliminated. This letter will serve as a formal Notice of Non-Compliance and by copy will inform our Enforcement Section of the violation.

During a telephone conversation on May 14, 1991, you stated that no detergent or soap is used in washing the trucks. You also stated that you would be willing to devise some means of resolving the problem.

Wash water would contain sediment, oil, grease, fuel and other pollutants even if only potable water is used for washing. The simplest solution to the problem would be to wash the trucks and trailers at a commercial car/truck wash which is connected to the McMinnville sewer system. If washing is to continue on the site, a suitable structure with sewer connection should be built. This would include a canopy and curbing to prevent runoff from leaving the site and rainwater from entering the sewers. A sediment trap would have to be constructed to exclude heavy solids from the sewer lines. The facility would also have to meet any requirements set by the City of McMinnville.

A 12,000 gallon above ground tank is used at by your company for storage of fuel. The storage tank has no containment structure of dyking. Federal law (Federal Register 40 CFR-112) requires secondary containment and development of a Spill Prevention Control and Countermeasure Plan (SPCC Plan) for such storage tanks. On May 14, you were advised of this requirement and the need to correct this problem. A copy of the Federal requirements and information regarding appropriate actions following a spill have been forwarded to you since that conversation.

We are requesting that you submit a written reply to this office within fifteen (15) days of receipt of this letter stating what actions you have taken, or plan to take, to eliminate the violation. Specific corrective measures and completion dates should be provided. We appreciate your prompt attention to this matter.

If you have any questions regarding the correspondence or the investigation, please contact Ann Rochelle at this office, 741-7391.

Sincerely,

Joe E. Holland, Jr.
Manager, Nashville Basin Office
Division of Water Pollution Control

JEH/AR/E5261177/D4/L&M

cc: Sims Crownover, Enforcement Section
Todd Hutchins, Div. Groundwater Protection, Warren Co.

NAS 12/22
JEH 1/3
MCT 1-5
ASH 1-5
BGL 1-5
JMH 1/9

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE ENVIRONMENTAL FIELD OFFICE
537 BRICK CHURCH PARK DRIVE
NASHVILLE, TENNESSEE 37243-1550

CERTIFIED MAIL
P 315 345 584

December 22, 1994

Mr. Stan Hillis, Owner
Hillis Trucking Company
126 Gulf Plant Road
McMinnville, Tennessee 37110

Re: Diesel Spill
McMinnville, Warren County

Dear Mr. Hillis:

On December 15, 1994, personnel from the Division of Water Pollution Control investigated a complaint regarding allegations of a diesel fuel spill and accumulation in two backyards of residences adjacent to Hillis Trucking Company. Our investigation confirmed that this was a valid complaint. The two backyards were blackened over an area of about 15 feet by 100 feet, with an oily residue which had an odor similar to diesel fuel. Discussions with you, and an inspection of your company premises, revealed that a substantial volume of diesel fuel had been spilled behind your truck washing shed. This fuel had flowed down a ditch beside the shed, into an onsite storm drain, exited the storm drain at your property line, then across the backyards of the two adjacent properties (111 and 113 King Street), then into the City's stormwater sewer system which discharges to the Barren Fork River. You later determined that someone filling a diesel fuel tank had allowed the tank to run over and spill an estimated couple of hundred gallons of diesel fuel. It is estimated that this spill occurred sometime during the last week of November.

Such pollution of the surface waters of the State, and possible pollution of its ground waters, is a violation of the Tennessee Water Quality Control Act, T.C.A. 69-3-101 et seq. This letter will serve as the formal Notice of Noncompliance, and by copy will inform the Enforcement Section of this violation.

As we discussed, all of the soil contaminated by this spill will need to be excavated and disposed of in accordance with Division of Solid Waste Management (DSWM) requirements. By copy of this letter we are notifying DSWM, Cookeville Field Office, Mr. Barry Atnip, telephone (615) 432-4015. We recommend that you get in touch with Mr. Atnip for guidance regarding the proper methods of storage, testing, and disposal of the contaminated soil.

We recommend that you get in touch with the affected adjacent property owners, and the City, regarding these corrective actions and the restoration of the storm drainage ditch.

We request that you send us, within fifteen (15) days after receipt of this Notice, a written response stating what actions will be taken to clean up and restore the contaminated areas, and what actions will be taken to prevent a future spill like this. Please be specific in describing these actions, and please provide a completion date for each action listed.

We appreciate your interest in this matter, and your desire that Hillis Trucking Company be a 'good neighbor' in the community. Should you have any questions in this matter, please call me at (615) 741-7391.

Sincerely,

David T. Irvine

David T. Irvine
Nashville Field Office
Division of Water Pollution Control

CC:
Barry Atnip - SWM/Cookeville Field Office
Sims Crownover - WPC/Central Office/Enforcement Section
Honorable Norman W. Rone, Mayor, City of McMinnville

[illegible] St.
McMinn. Tn 37118
Dec 31, 1944

To whom it may concern:

I have written to you before about a matter that concerns the enviroment.

We have a problem behind our house namely the Hillis Trucking Co. They continue to wash trucks and other vehickles and the oil keeps congregating and going into the ground.

They put a pipe in for the water to run through but it doesn't solve the problem. The oil is going down drain onto other people's propty and ruining their lawn, these people called me told me about it.

Also the oil fumes makes it difficult to breath especially in warmer weather. It would seem that they would build a fence around their proptery to help us out but they don't care.

concerned we don't get any help, it seems money talks around here.

If you could send a representative here from Nashville to check this out and counsel gladly walk through this problem with you.

Also they buried some old truck and car parts underground. They stir tires on their property also fine gravel that blows in the air for us to breath. Please help us with this problem.

Thank you so much
Mildred Duke

P.S. Would it help us to get channel 2 to help us out?

NAS 12/16
JEH 12/19
AER 1/9

I.D.# 2544

COMPLAINT INVESTIGATION
DIVISION OF WATER POLLUTION CONTROL
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

COUNTY Warren Co. TOWN McMinnville

STREAM

DRAINAGE

POLLUTANT Diesel Fuel

POLLUTION SOURCE
NAME Hillis Trucking Co.
ADDRESS 126 Gulf Plant Road
McMinnville TN 37110
Stan Hillis, Owner
PHONE 615-473-7700

DATE OF COMPLAINT 8 Dec 1994 RECEIVED BY J. Irvine

COMPLAINT FROM Patricia Roberts PHONE 615-473-7838

COMPLAINING ABOUT "Black oil" all over her backyard - Thinks it happened about 10 days ago - Can't get anyone to come look at it. Thinks it came from Hillis Trucking Co. next door.

LOCATION 111 King Street

DATE OF INVESTIGATION 15 Dec '94 BY J. Irvine

PHOTOS TAKEN: YES ✓ NO ___ TOPO NO 92 NE SAMPLES COLLECTED: YES ___ NO ✓

REPORT & RECOMMENDATIONS Met with Mrs Roberts - She showed me area in her back yard next to Hillis Co. driveway. Area behind her house + neighbors house was blackened with black oily material. Area about 15 ft wide x 100 ft long was blackened - Slight smell of diesel fuel. Appeared to have flowed into the backyards from Hillis property - Took numerous photos. Met with James Tittsworth, Manager + Stan Hillis, Owner - They said they were not aware of spill. I showed Mr Hillis the blackened backyards. We followed flow line upstream - Found blackened ditch adjacent to Hillis truck washing shed. Had pools of diesel + water in rock lined ditch - Blackening stopped behind shed. Mr Hillis queried his employees + learned that a trucker refilling a fuel tank behind the shed let the tank run over and spill a couple of hundred gallons of diesel fuel. This fuel flowed down the ditch beside the shed, into a short

DATE COMPLAINANT NOTIFIED OF FINDINGS 16 Dec 1994 STATUS NONC to be sent
Cookeville OSWM notified

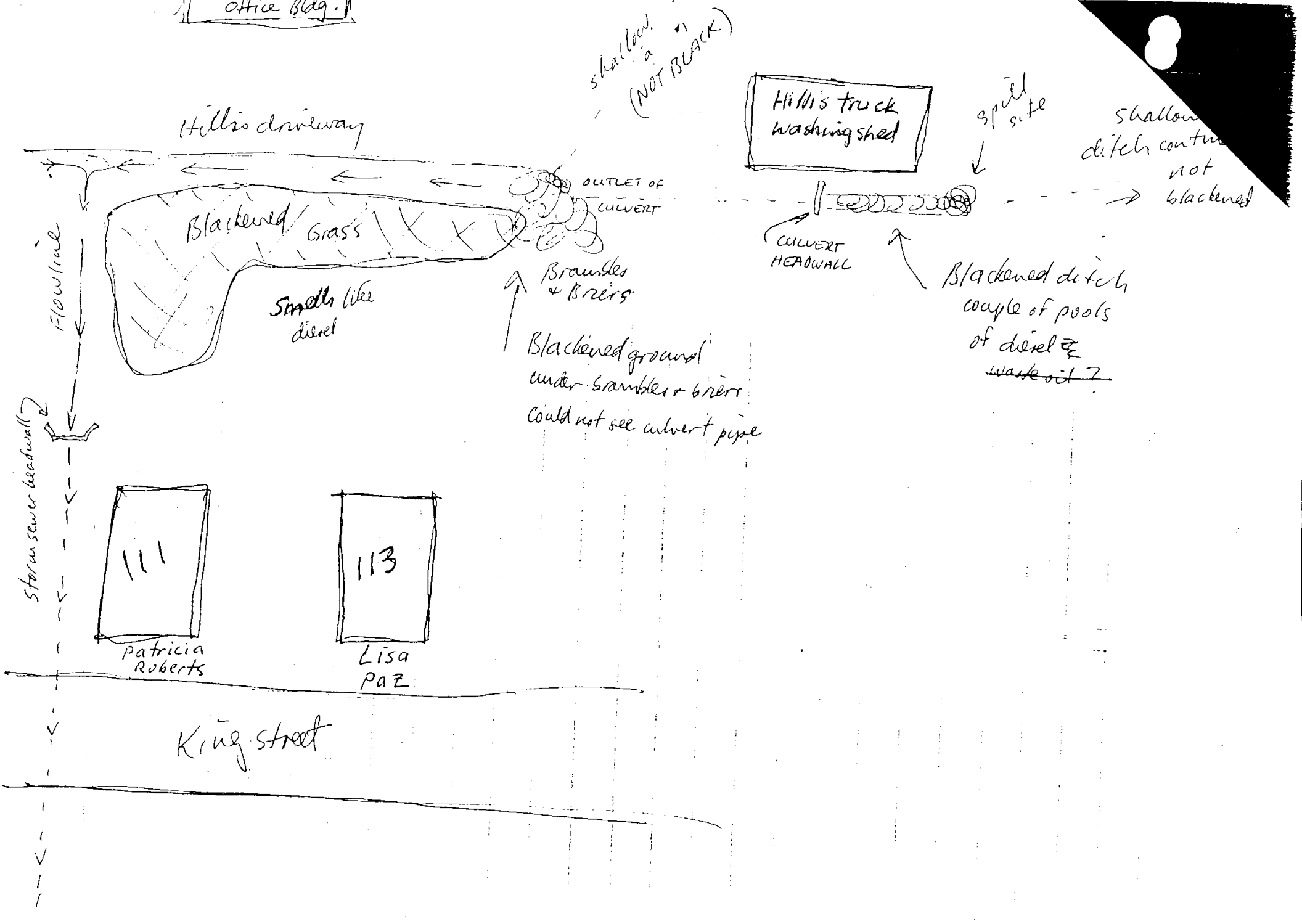
POLLUTANT CHOICES	STATUS CHOICES
SEWAGE	PENDING
OIL	RESOLVED
INDUSTRIAL	NO PROBLEM
ANIMAL WASTE	NONC SENT, TO BE SENT
GARBAGE	REFERRED TO(E.G. SWM,DWS)
ODOR	INSPECTION SCHEDULED
NONPOINT	FOLLOWUP NEEDED
OTHER	
UNKNOWN	

storm drain across Hillis parking/drive area, then exited into the adjacent backyards - d discussed this with Ann Rochelle, then advised Mr Hillis what he had to do to clean up the mess + to dispose of the contaminated soil. Also advised him to contact Barry Stricp, Cookeville DSWM, re: proper disposal of this soil. Mr Hillis said he had to do this once before, and that he knew what he had to do. He said he would have an environmental cleanup company take care of the matter.
16 Dec. 94 d notified Barry Stricp, Cookeville DSWM, 432-4015
Tony Myers, WWTP Chief Operator, said something comparable to diesel fuel came to the WWTP + caused problems. They could not find source.

Emergency	911
Ambulance Service	473-5566
Warren Co Sheriff Dept	473-6555
County Excutive	473-9536
City Hall	473-2505
	473-6691

1805

Mon.


Office Bldg.
shallow ditch (NOT BLACK)
Hillis driveway
Hillis truck washing shed
spill site
shallow ditch continues not blackened
OUTLET OF CULVERT
Blackened Grass
Flowline
Smells like diesel
Brambles & Briers
CULVERT HEADWALL
Blackened ditch couple of pools of diesel & ~~waste oil~~ ?
Blackened ground under brambles & briers
Could not see culvert pipe
Storm sewer headwall
111
113
Patricia Roberts
Lisa Paz
King street

NAS 1/12
JEH 1/12
MRT 1-13
AEP 1/17

complaint file

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE ENVIRONMENTAL FIELD OFFICE
537 BRICK CHURCH PARK DRIVE
NASHVILLE, TENNESSEE 37243-1550

January 10, 1995

Mrs. Mildred Duke
121 King Street
McMinnville, Tennessee 37110

Re: Hillis Trucking Company
McMinnville, Warren County

Dear Mrs. Duke:

Thank you for your letter of December 31, 1994, regarding Hillis Trucking Company. We understand and appreciate your concerns in this matter. It happens that on December 8, 1994, one of your neighbors telephoned a similar complaint to our office. On December 15, 1994, I made an investigation and found the complaint to be valid. For your information, I am enclosing a copy of the Notice of Noncompliance which I sent to Mr. Stan Hillis, owner of Hillis Trucking Company. I've met with Mr. Hillis, and he regrets the mess created by the diesel spill. He stated that he wants to be a "good neighbor" to everyone, and he knows what he has to do to clean up this mess.

Thanks again for your interest in this matter. If you have any further problems with Hillis Trucking Company, please feel free to call me at (615) 741-7391.

Sincerely,

David T. Irvine

David T. Irvine
Nashville Field Office
Division of Water Pollution Control

Enclosure

NAS 2/6

JH 2/8

MEMO TO COMPLAINT FILE

FROM: David T. Irvine, WPC/NFO

DATE: February 2, 1995

RE: Complaint No. 2544, December 8, 1944
Diesel Spill
Hillis Trucking Company
McMinnville, Warren County

This complaint was investigated on December 15, 1994. An NONC was sent to Mr. Stan Hillis, Owner, Hillis Trucking Company, on December 22, 1994. This NONC included instructions to get in touch with Barry Atnip, DSWM, Cookeville Field Office, telephone (615) 432-4015, for cleanup guidance.

On January 23, 1995, I received a call from Lisa Paz, 113 King Street (adjacent to Hillis Trucking Co.), telephone 473-1969 (home after 4:00pm), 668-4296 (work). Her father is Pedro Paz, 686-8946 (home), 473-2331 (work). She reported that Hillis had dumped a couple of truck loads of dirt adjacent to the spill site, and she was concerned that Hillis was going to just cover the diesel spill rather than clean it up properly.

Subsequent phone calls to Barry Atnip, DSWM/CFO, and to Al Majors & Daniel Roop, DSWM/NFO, indicated that Hillis had not been in touch with either at that time.

On January 31, 1995, I phoned Mr. Hillis to inquire as to what was going on with regard to the spill cleanup. Mr. Hillis advised me that he has hired Harper Construction Company to handle the cleanup, that Harper had sent soil sample test data to DSWM/CFO, and that DSWM/CFO had requested additional tests.

On January 31, 1995, I phoned Barry Atnip again. Barry confirmed that DSWM/CFO yesterday had received soil test data from Harper on the Hillis spill site, that the initial test data confirmed that the site is contaminated with diesel fuel, and that additional test data was requested of Hillis.

Since it appeared that Hillis was proceeding with the cleanup in an appropriate manner, on February 1 I notified the complainant, Lisa Paz, of these findings. Ms. Paz then said that on January 3 Hillis had spread the soil and covered up the spill site.

On February 2 I notified Barry Atnip of Ms. Paz' statement that the spill site had been covered up. Barry said that he would relay this information to Bryant Stephens, who has been to the site according to Barry, and is handling this matter. Barry said that the soil may have been placed to serve as a cap over the contaminated soil pending test results, etc.

REFERENCE 13

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS IN SELECTED AREAS OF TENNESSEE

EXPLANATION OF COLUMN HEADINGS

QUAD/NTH = Designation by number, Quadrant and ninth of the 2.5 - minute quadrangle area in which the well is located. The leading numbers identify the 15-minute quadrangle, the next two letters identify the 7.5-minute quadrant and the last digit identifies the one-ninth subdivision of the latter.

COUNTY = County in which the well is located.

WELL NUM = Identification number assigned to the well by the State.

TAG NUM = An inspection number assigned to the well at the time of inspection by the State.

OWNER'S NAME = Name of person or organization for whom the well was drilled.

LOCATION ROAD = Name of street or road from which to access the well. Blank if unknown.

COMP DATE = Month, day and year the well was completed.

INSPT DATE = Month, day and year the well was inspected by TDHE. Blank if well has not been inspected.

TOT DEPTH = Total depth of the well in feet.

AQ DEPTH = Depth, in feet, below land surface to the top of the shallowest aquifer or water-bearing zone tapped by the well.

TOT YIELD = Total yield of the well in gallons per minute (gpm). Yields less than one-half gpm reported as zero.

STAT LEVEL = Static water-level: depth, in feet, from the land surface to the surface of the water standing in an idle well.

CSE DEPTH = Casing depth: depth, in feet, to the bottom of the water tight casing installed in the well.

CSE TYPE = Casing type: PLAST = Plastic; STEEL = Steel; OTHER = any other material such as concrete, fiberglass or tile.

WELL FINISH = Construction of the well in the interval supplying water to the well: OPEN = Uncased or open hole; SLOT = Hand perforated or slotted pipe; SCREEN = Manufactured device designed to maintain the wall of the borehole and allow ground water to enter the well.

INTERVAL = The depth, in feet, from the top to the bottom of the interval that is open to the well.

WAT QUAL = Water Quality: a word to describe the relative quality of the well water such as GOOD, FAIR, BAD, LIME, IRON, SULFUR, SALT, OIL, GAS, OTHER.

GEO FORM = Name of the geologic formation tapped by the well (not generally reported).

LATITUDE = Latitude of well site in degrees, minutes, and seconds.

LONGITUDE = Longitude of well site in degrees, minutes, and seconds.

A/C = Accuracy Code for latitude and longitude: S = Nearest second; F = nearest 15 seconds; T = nearest 30 seconds; M = nearest minute; Blank = nearest 2.5 minutes.

LOG = Refers to availability of drillers log: Y = yes; N = no.

DRILLER = License number of driller who supervised construction of the well. Names provided upon request.

USE = Purpose for which the well was constructed: HOME = residential; COMM = commercial; etc.

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS ON THE MCMINNVILLE QUADRANGLE (0092NE) TN.

QUAD / NTH COUNTY	WELL NUM REG NUM	OWNER'S NAME LOCATION ROAD	COMP DATE INSPT DATE	TOT DEPTH AQ DEPTH	TOT YIELD STAT LEVEL	CSE DEPTH CSE TYPE	WELL FINISH INTERVAL	WAT QUAL TAG NUM	LATITUDE LONGITUDE	A/C LOG	DRILLER USE
0092NE 1	17700724	ATNIP ___ ___STEV	05/07/1987	50	20	42	SLOT	GOOD	- -		00600
WARREN		OLD DAYLIGHT OR	/ /	32	30	STEEL	32 - 42		- -	Y	HOME
0092NE 1	17700005	BRACHER K	09/11/1963	63	10	20		GOOD	- -		00003
WARREN			/ /	60	40	STEEL	-- - --		- -		HOME
0092NE 1	17700765	BRATCHERS_NURSE	11/12/1987	229	10	89	OPEN	OTHR	- -		00572
WARREN		#705	/ /	145	--	STEEL	89 - 229		- -	Y	IRR
0092NE 1	17700725	EDGE_____TROY	05/02/1987	53	10	12	SLOT	GOOD	- -		00600
WARREN		PUCKETT RD	/ /	38	38	STEEL	38 - 44		- -	Y	HOME
0092NE 1	17700803	GAITHER_____AL_	06/30/1988	185	15	41	OPEN	GOOD	-		00068
WARREN		BETHANY	/ /	80	50	STEEL	41 - 185		- -	Y	IRR
0092NE 1	17700804	GAITHER_____AL_	06/21/1988	85	20	41	OPEN	GOOD	- -		00068
WARREN		BETHANY	/ /	70	50	STEEL	41 - 85		- -	Y	IRR
0092NE 1	17700280	HILLIS J L	10/08/1969	190	--	29		BAD	35-43-32	S	00088
WARREN			/ /	--	--	PLAST	-- - --		85-50-35		FARM
0092NE 1	17700323	JONES J	08/09/1969	198	1	44		GOOD	35-43-26	S	00221
WARREN			/ /	100	100	STEEL	-- - --		85-51-25		HOME
0092NE 1	17700794	LOWTHER _____DAN_	04/15/1988	60	10	50	SCREEN	GOOD	- -		00600
WARREN		BETHANY	/ /	50	45	STEEL	50 - 60		- -	Y	HOME
0092NE 1	17700895	NORTHCUTT_____EVER	08/18/1989	63	10	37	SLOT	GOOD	- -		00600
WARREN			/ /	34	50	STEEL	34 - 37		- -	Y	HOME
0092NE 1	17700662	ODINEAL_____RAY_	06/22/1985	87	10	75	SLOT	GOOD	- -		00600
WARREN		BETHANY	/ /	75	74	PLAST	75 - 85		- -	Y	HOME
0092NE 1	17700643	PENNINGTON_____TERR	09/09/1988	128	25	48	OPEN	OTHR	-		00068
WARREN		DAYLIGHT RD	/ /	65	50	STEEL	48 - 128		- -	Y	IRR
0092NE 1	17700355	WHITLOCK J	06/21/1971	90	10	76		GOOD	35-42-45	S	00221
WARREN			/ /	80	40	STEEL	-- - --		85-52-24		HOME
0092NE 2	17700770	BOLIN NURSERY	01/28/1988	144	10	43	OPEN	FAIR	35-43-14	S	00600
WARREN		YAGER	/ /	43	120	PLAST	43 - 144		85-48-00	Y	HOME
0092NE 2	93003640	BRYSON _____ FRED	05/21/1993	60	100	60	SLOT	GOOD	- -		00008
WARREN		WEST JONES	/ /	50	40	PLAST	40 - 60		- -	Y	HOME
0092NE 2	17700640	DODD_____TOMM	08/20/1984	94	10	55	OPEN	GOOD	-		00600
WARREN		SEE COMMENTS	/ /	52	80	PLAST	55 - 94		- -	Y	HOME

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS ON THE MCMINNVILLE QUADRANGLE (0092NE) TN.

QUAD / NTH COUNTY	WELL NUM REG NUM	OWNER'S NAME LOCATION ROAD	COMP DATE INSPT DATE	TOT DEPTH AQ DEPTH	TOT YIELD STAT LEVEL	CSE DEPTH CSE TYPE	WELL FINISH INTERVAL	WAT QUAL TAG NUM	LATITUDE LONGITUDE	A/C LOG	DRILLER USE
0092NE 2 CANNON	01501000	DUKE HILT DUKES RD	07/06/1987 05/26/1988	170 48	5 1250	60 PLAST	OPEN 60 - 170	GOOD	35-43-14 85-48-00	S Y	00559 FARM
0092NE 2 WARREN	17700864	ELLIOTT_____JAME JUDGE WARREN	04/19/1989 / /	248 135	7 110	62 STEEL	SLOT 65 - 145	OTHR	- - - -	Y	00068 IRR
0092NE 2 WARREN	17700566	JONES W	11/00/1980 / /	100 85	10 40	80 STEEL	-- - - -	GOOD	35-44-36 85-49-46	S	00560 HOME
0092NE 2 WARREN	90003344	JONES_____WESL WEST JONES	09/27/1990 / /	61 43	10 43	43 STEEL	SLOT 43 - 53	GOOD	- - - -	Y	00600 HOME
0092NE 2 WARREN	17700666	LINESAY_____JOEY SHORT MT RD	09/16/1985 / /	81 70	10 66	51 STEEL	OPEN 51 - 81	GOOD	- - - -	Y	00600 HOME
0092NE 2 WARREN	93003592	MORTONS HORTICULTUR HWY 56	07/24/1993 / /	145 35	20 20	21 STEEL	OPEN 21 - 145	GOOD	- - - -	Y	00008 IRR
0092NE 2 WARREN	17700367	PEDEGO K	05/15/1970 / /	90 70	14 50	55 STEEL	-- - -- --	GOOD	35-42-41 85-48-41	S	00221 HOME
0092NE 2 WARREN	17700877	UNDERWOOD_____CHAR DAYLIGHT	07/09/1988 / /	160 155	26 80	42 STEEL	OPEN 42 - 160	OTHR	- - - -	Y	00008 IRR
0092NE 3 WARREN	17700760	BOULDIN_& LAWSO 56 HIGHWAY	08/21/1987 05/26/1988	1321 115	0 1050	119 STEEL	SLOT 114 - 119	GOOD	35-42-59 85-47-06	S Y	00600 HEAT
0092NE 3 WARREN	17700872	BOULDIN_&_LAWSO HWY 56	07/27/1988 / /	265 74	8 60	74 STEEL	SLOT 74 - 265	OTHR	- - - -	Y	00008 HEAT
0092NE 3 WARREN	17700827	BOULDIN_____FLOY HY 56	05/10/1988 05/26/1988	312 112	5 112	105 STEEL	OPEN 105 - 312	GOOD	35-42-59 85-47-07	S Y	00008 IRR
0092NE 3 WARREN	17700035	BROCK D	01/00/1964 / /	86 65	500 60	86 STEEL	-- - -- --	GOOD	35-44-36 85-46-58	S	00180 HOME
0092NE 3 WARREN	92000282	DAVIS_____JAME FAULKNER SPRING	10/17/1991 / /	105 43	12 30	35 STEEL	OPEN 35 - 105	BAD	- - - -	Y	00008 IRR
0092NE 3 WARREN	90001726	STEWART'S_NURSE HWY 56	06/19/1990 / /	105 83	20 5	79 STEEL	OPEN 79 - 105	OTHR	- - - -	Y	00068 IRR
0092NE 3 WARREN	17700769	STEWART_____ DERW HWY 56	10/20/1987 / /	203 85	50 65	83 STEEL	OPEN 83 - 203	BAD	- - - -	Y	00571 IRR
0092NE 4 WARREN	17700363	LOWE L	08/11/1970 / /	78 70	10 40	42 STEEL	-- - -- --	GOOD	35 40-05 85-51-31	S	00221 HOME

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS ON THE MCMINNVILLE QUADRANGLE (0092NE) TN.

QUAD / NTH COUNTY	WELL NUM REG NUM	OWNER'S NAME LOCATION ROAD	COMP DATE INSPT DATE	TOT DEPTH AQ DEPTH	TOT YIELD STAT LEVEL	CSE DEPTH CSE TYPE	WELL FINISH INTERVAL	WAT QUAL TAG NUM	LATITUDE LONGITUDE	A/C LOG	DRILLER USE
0092NE 4 CANNON	91001633	MORRISON_____DAVI JACKSBORO	12/10/1990 / /	85 63	10 63	63 STEEL	OPEN 63 - 85	GOOD	- - - -	Y	00008 HOME
0092NE 4 WARREN	17700354	OVERALL	/ /19 / /	150 90	1 --	52 STEEL	-- - --	BAD	35-40-28 85-51-00	S	00221 MDOM
0092NE 4 WARREN	17700633	PARKER_____ __ __WAND PARKER	10/12/1983 / /	65 65	75 40	-- OTHER	-- - --	OTHR	- - - -	Y	00008 OTHR
0092NE 4 WARREN	17700364	REDMAN L R	08/17/1970 / /	120 100	7 --	52 STEEL	-- - --	GOOD	35-41-55 85-52-27	S	00221 HOME
0092NE 4 WARREN	17700442	RUSSELL T J	05/08/1973 / /	75 73	8 40	70 STEEL	-- - --	GOOD	35-41-52 85-52-30	S	00221 HOME
0092NE 4 WARREN	17700450	SAIN V	05/04/1972 / /	130 125	8 100	56 STEEL	-- - --	BAD	35-41-08 85-51-28	S	00221 HOME
0092NE 4 WARREN	17700401	SAIN V	09/20/1972 / /	100 80	4 70	58 STEEL	-- - --	GOOD	35-41-08 85-51-28	S	00221 HOME
0092NE 4 WARREN	17700365	SHOEMAKE I.	08/20/1970 / /	100 80	10 50	70 STEEL	-- - --	GOOD	- - - -		00221 HOME
0092NE 4 WARREN	17700460	TENPENNY J	03/16/1972 / /	98 85	8 60	58 STEEL	-- - --	GOOD	35-40-06 85-51-24	S	00221 HOME
0092NE 5 WARREN	17700456	BURCK C	06/14/1972 / /	123 100	10 80	40 STEEL	-- - --	GOOD	35-41-20 85-48-31	S	00221 HOME
0092NE 5 WARREN	17700847	HALE_____JACK RD BETWEEN OLD	10/01/1988 / /	96 75	10 75	41 STEEL	OPEN 41 - 96	GOOD	- - - -	Y	00600 COMM
0092NE 5 WARREN	90001257	HOLDER_____RALP 1/4 MI N OLD SH	04/10/1990 / /	60 45	10 4	20 STEEL	-- - --	GOOD	- - - -	Y	00600 HOME
0092NE 5 WARREN	17700070	LEWIS W	09/01/1964 / /	103 93	5 88	73 STEEL	-- - --	GOOD	35-41-19 85-48-24	S	00180 HOME
0092NE 5 WARREN	92002103	MILLS_____ _____LOYD DAYLIGHT	06/11/1992 / /	105 64	4 63	41 STEEL	OPEN 102 - 105	OTHR	- - - -	Y	00068 IRR
0092NE 5 WARREN	17700862	NEWBY_ __ _____J_C_ LAW'S RD	06/22/1988 /	105 35	25 30	41 STEEL	OPEN 41 105	GOOD	- - - -	Y	00068 IRR
0092NE 5 WARREN	17700899	NEWBY _____J.C LAW'S	06/30/1988 / /	165 75	20 60	41 STEEL	OPEN 41 - 165	GOOD	- - - -	Y	00068 IRR

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS ON THE MCMINNVILLE QUADRANGLE (0092NE) TN.

QUAD / NTH COUNTY	WELL NUM REG NUM	OWNER'S NAME LOCATION ROAD	COMP DATE INSPT DATE	TOT DEPTH AQ DEPTH	TOT YIELD STAT LEVEL	CSE DEPTH CSE TYPE	WELL FINISH INTERVAL	WAT QUAL TAG NUM	LATITUDE LONGITUDE	A/C LOG	DRILLER USE
0092NE 5	17700873	NEWPORT_____CHAR	07/09/1988	265	3	42	OPEN	OTHR	- -		00008
WARREN		OLD DAY LIGHT	/ /	125	80	STEEL	42 - 265		- -	Y	IRR
0092NE 5	17700874	NEWPORT_____CHAR	07/10/1988	165	10	28	OPEN	OTHR	- -		00008
WARREN		OLD DAY LIGHT	/ /	75	65	STEEL	28 - 165		- -	Y	IRR
0092NE 5	92000283	PRATER_____KELL	10/18/1991	125	--	42	OPEN	BAD	- -		00008
WARREN		DAYLIGHT	/ /	120	--	STEEL	42 - 125		- -	N	FARM
0092NE 5	92000284	PRATER_____KELL	10/19/1991	205	0	49	OPEN	OTHR	- -		00008
WARREN		DAYLIGHT	/ /	145	--	STEEL	49 - 205		- -	Y	FARM
0092NE 5	17700691	RIGSBY_____FRED	05/13/1986	205	15	20	OPEN	OTHR	- -		00008
WARREN		RIGSBY RD	/ /	165	120	STEEL	20 - 205		- -	Y	FARM
0092NE 5	17700366	TAYLOR L	08/05/1970	100	8	40		GOOD	35-41-04	S	00221
WARREN			/ /	70	70	STEEL	-- - --		85-49-06		HOME
0092NE 6	17700484		/ /19	--	--	--			35-40-41	S	
WARREN			/ /	--	--		-- - --		85-52-55		FARM
0092NE 6	17700259	AVALON CHEESE CO	12/06/1968	92	30	65		BAD	35-40-28	S	00055
WARREN			/ /	70	30	STEEL	-- - --		85-45-33		IND
0092NE 6	17700260	AVALON DAIRIES	12/14/1968	210	--	71		BAD	35-41-39	S	00055
WARREN			/ /	200	40	STEEL	-- - --		85-45-39		IND
0092NE 6	17700106	CARAHAN A	07/24/1965	122	7	34		GOOD	35-42-02	S	00221
WARREN			/ /	100	97	STEEL	-- - --		85-45-20		
0092NE 6	17700863	CHURCH_OF_JESUS	12/30/1988	225	30	51	OPEN	GOOD	- -		00001
WARREN			/ /	100	--	STEEL	51 - 225		- -	Y	IRR
0092NE 6	17700707	FANN_____BRAT	09/18/1986	99	10	43		GOOD	- -		00600
WARREN		MULLICAN	/ /	42	90	PLAST	41 - 43		- -	Y	OTHR
0092NE 6	17700690	MARTIN_____JAME	05/21/1986	115	75	42	OPEN	OTHR	- -		00008
WARREN		J CAR WASH SMIT	/ /	100	65	STEEL	42 - 105		- -	Y	COMM
0092NE 6	91000713	MARTIN_____STAN	03/01/1991	60	10	24		GOOD	- -		00600
WARREN		56 HIGHWAY	/ /	50	48	STEEL	-- - --		- -	Y	OTHR
0092NE 6	17700059	PELHAM D	07/30/1964	129	8	48		GOOD	35-40-11	S	00221
WARREN			/ /	123	115	STEEL	-- - --		85-45-53		
0092NE 6	17700238	ROSS B	08/02/1968	120	40	24		BAD	35-40-28	S	00055
WARREN			/ /	95	--	STEEL	-- - --		85-46-12		HOME

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS ON THE MCMINNVILLE QUADRANGLE (0092NE) TN.

QUAL / NTH COUNTY	WELL NUM REG NUM	OWNER'S NAME LOCATION ROAD	COMP DATE INSPT DATE	TOT DEPTH AQ DEPTH	TOT YIELD STAT LEVEL	CSE DEPTH CSE TYPE	WELL FINISH INTERVAL	WAT QUAL TAG NUM	LATITUDE LONGITUDE	A/C LOG	DRILLER USE
0092NE 6 WARREN	17700082	ST CATHERINE CHURCH	10/09/1964 / /	75 --	-- --	37 STEEL	-- - --		35-42-10 85-45-55	S	00217 MDOM
0092NE 6 WARREN	92002709	TRIVETT_____LLOY HWY 55	06/11/1992 / /	95 45	54 45	29 STEEL	OPEN 29 - 95	H2S	- - - -	Y	00008 IRR
0092NE 7 WARREN	92002689	AMERICAN TREE NUR HWY 55	04/22/1992 / /	105 35	2 30	29 STEEL	OPEN 29 - 105	GOOD	- - - -	Y	00008 IRR
0092NE 7 WARREN	92002690	AMERICAN TREE NURSE HWY 55	04/23/1992 / /	85 28	5 25	20 STEEL	OPEN 21 - 85	GOOD	- - - -	Y	00008 IRR
0092NE 7 WARREN	17700062	BLAIR A	07/13/1964 / /	88 80	12 65	73 STEEL	-- - --	GOOD	35-38-46 85-50-25	S	00221
0092NE 7 WARREN	17700688	BOYD_____JOE_ HWY 55 SMARTT S	07/02/1985 / /	85 65	35 20	32 STEEL	OPEN 32 - 85	OTHR	- - - -	Y	00008 IRR
0092NE 7 WARREN	17700060	DENTON J	07/16/1964 / /	53 40	10 30	34 STEEL	-- - --	GOOD	35-38-43 85-50-39	S	00221
0092NE 7 WARREN	17700181	HART L	01/24/1967 / /	66 63	15 30	62 STEEL	-- - --	GOOD	35-38-43 85-51-12	S	00221
0092NE 7 WARREN	17700268	HERRAN D	04/19/1969 / /	102 75	6 50	60 OTHER	-- - --	GOOD	35-38-16 85-51-25	S	00022 FARM
0092NE 7 WARREN	17700576	MIX T.	08/31/1980 / /	85 80	20 40	40 STEEL	-- - --	GOOD	35-38-14 85-51-08	S	00008 HOME
0092NE 7 WARREN	17700643	M_C_COUNTRY_CLU HWY 55	02/10/1984 / /	225 45	40 45	27 STEEL	OPEN 27 - 225	GOOD	- - - -	Y	00008 HEAT
0092NE 7 WARREN	93000529	SOUTHERN CENTRAL IR HY 55	12/04/1992 / /	90 80	40 70	72 STEEL	OPEN 72 - 90	GOOD	- - - -	Y	00008 IND
0092NE 7 WARREN	17700421	STEWART F	02/17/1972 / /	85 75	25 --	43 STEEL	-- - --	GOOD	35-48-50 85-50-42	S	00008 FARM
0092NE 7 WARREN	17700375	TODD M	05/12/1970 / /	86 80	10 40	73	-- - --	GOOD	35-37-52 85-51-29	S	00221 HOME
0092NE 7 WARREN	17700298	VICKERS	07/00/1969 / /	82 75	20 30	45 STEEL	-- - --	GOOD	35-38-20 85-51-13	S	00008 FARM
0092NE 7 WARREN	17700299	VICKERS D	07/00/1969 / /	123 115	40 --	53 STEEL	-- - --	BAD	35-38-20 85-51-13	S	00008 FARM

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS ON THE MCMINNVILLE QUADRANGLE (0092NE) TN.

QUAD / NTH COUNTY	WELL NUM REG NUM	OWNER'S NAME LOCATION ROAD	COMP DATE INSPT DATE	TOT DEPTH AQ DEPTH	TOT YIELD STAT LEVEL	CSE DEPTH CSE TYPE	WELL FINISH INTERVAL	WAT QUAL TAG NUM	LATITUDE LONGITUDE	A/C LOG	DRILLER USE
0092NE 7 WARREN	17700466	WALKER J C	01/20/1972 / /	70 63	8 40	36 STEEL	-- - --	GOOD	35-39-58 85-51-16	S	00221 FARM
0092NE 8 WARREN	17700225	CANTRELL B	04/15/1968 / /	116 95	7 85	42 STEEL	-- - --	GOOD	35-37-53 85-48-52	S	00022
0092NE 8 WARREN	17700267	HENNESSEE B	04/04/1969 / /	95 73	4 --	54 STEEL	-- - --	BAD	35-37-51 85-48-30	S	00098 FARM
0092NE 8 WARREN	17700499	ST JOHN C.D.	02/28/1973 / /	117 105	50 70	50 STEEL	-- - --	GOOD	35-39-12 85-47-54	S	00008 COMM
0092NE 9 WARREN	94001925 D0000215	BARNETT_____RAY_ WATER TANK RD	06/13/1994 / /	165 108	10 100	83 STEEL	OPEN 83 - 165	GOOD	- - - -	Y	00008 FARM
0092NE 9 WARREN	17700700	CITY_OF_MCMINNV HWY 27	10/31/1986 / /	122 110	-- 108	29 STEEL	SCREEN 112 - 122	OTHR	- - - -	Y	00068 MON
0092NE 9 WARREN	17700701	CITY_OF_MCMINNV HWY - 27	10/31/1986 / /	73 63	4 37	63 STEEL	SCREEN 63 - 73	OTHR	- - - -	Y	00068 MON
0092NE 9 WARREN	17700702	CITY_OF_MCMINNV HWY - 27	10/31/1986 / /	110 100	-- 103	33 STEEL	SCREEN 100 - 110	OTHR	- - - -	Y	00068 MON
0092NE 9 WARREN	17700703	CITY_OF_MCMINNV HWY 27	10/31/1986 / /	75 67	-- 68	37 STEEL	SCREEN 65 - 75	OTHR	- - - -	Y	00068 MON
0092NE 9 WARREN	17700704	CITY_OF_MCMINNV HWY 27	10/31/1986 / /	85 --	-- 82	64 STEEL	SCREEN 75 - 85	OTHR	- - - -	Y	00068 MON
0092NE 9 WARREN	17700708	JORDEN_____VERN 106	06/10/1985 / /	165 --	26 --	29 STEEL	OPEN 29 - 165	OTHR	- - - -	Y	00044 HOME
0092NE 9 WARREN	17700696	MARLIN_____CLYD 108 HWY	08/15/1986 / /	57 43	20 25	45 STEEL	SLOT 40 - 45	GOOD	- - - -	Y	00600 HOME
0092NE 9 WARREN	17700709	MARLIN_____CLYD 108 HIGHWAY	08/09/1985 / /	50 46	10 25	40 PLAST	SLOT 40 - 46	GOOD	- - - -	Y	00600 HOME
0092NE 9 WARREN	17700217	MCMINVILLE MFG CO	02/20/1967 / /	63 45	8 35	44 STEEL	-- - --	GOOD	35-39-22 85-47-17	S	00022 IND
0092NE 9 WARREN	92002680	TRIVETT_____LLOY PEPPER BR	03/31/1992 / /	75 30	70 30	20 STEEL	OPEN 21 - 75	GOOD	- - - -	Y	00008 IRR
0092NE 9 WARREN	17700837	WALKER_____RAND OLD VIOLA	07/07/1988 / /	70 56	10 30	50 STEEL	SLOT 50 - 56	GOOD	- - - -	Y	00600 IRR

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS ON THE MCMINNVILLE QUADRANGLE (0092NE) TN.

QUAD / NTH COUNTY	WELL NUM REG NUM	OWNER'S NAME LOCATION ROAD	COMP DATE INSPT DATE	TOT DEPTH AQ DEPTH	TOT YIELD STAT LEVEL	CSE DEPTH CSE TYPE	WELL FINISH INTERVAL	WAT QUAL TAG NUM	LATITUDE LONGITUDE	A/C LOG	DRILLER USE
0092NE 9 WARREN	17700842	WALKER_____RAND OLD VIOLA	08/25/1988 / /	160 59	10 130	64 STEEL	SLOT 59 - 64	OTHR	- - - -	 Y	00600 IRR
0092NE 9 WARREN	17700848	WALKER_____RAND OLD VIOLA	10/05/1988 / /	160 50	20 135	50 STEEL	SLOT 50 - 56	FAIR	- - - -	 Y	00600 IRR
0092NE 9 WARREN	17700011	WINFREY C	10/15/1963 / /	135 27	6 108	38 STEEL	 -- - --	BAD	35-38-15 85-47-12	S	00064 HOME
0092NE 9 WARREN	17700638	WISEMAN_____HUGH OLD VIOLA	07/20/1984 / /	61 40	10 18	40 PLAST	SLOT 40 - 61	GOOD	- - - -	 Y	00600 IRR

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS IN SELECTED AREAS OF TENNESSEE

EXPLANATION OF COLUMN HEADINGS

QUAD/NTH - Designation by number, Quadrant and ninth of the 2.5 - minute quadrangle area in which the well is located. The leading numbers identify the 15-minute quadrangle, the next two letters identify the 7.5-minute quadrant and the last digit identifies the one-ninth subdivision of the latter.

COUNTY = County in which the well is located.

WELL NUM = Identification number assigned to the well by the State.

TAG NUM = An inspection number assigned to the well at the time of inspection by the State.

OWNER'S NAME = Name of person or organization for whom the well was drilled.

LOCATION ROAD = Name of street or road from which to access the well. Blank if unknown.

COMP DATE = Month, day and year the well was completed.

INSPT DATE = Month, day and year the well was inspected by TDHE. Blank if well has not been inspected.

TOT DEPTH = Total depth of the well in feet.

AQ DEPTH = Depth, in feet, below land surface to the top of the shallowest aquifer or water-bearing zone tapped by the well.

TOT YIELD = Total yield of the well in gallons per minute (gpm). Yields less than one-half gpm reported as zero.

STAT LEVEL = Static water-level: depth, in feet, from the land surface to the surface of the water standing in an idle well.

CSE DEPTH = Casing depth: depth, in feet, to the bottom of the water tight casing installed in the well.

CSE TYPE = Casing type: PLAST = Plastic; STEEL = Steel; OTHER = any other material such as concrete, fiberglass or tile.

WELL FINISH = Construction of the well in the interval supplying water to the well: OPEN = Uncased or open hole; SLOT = Hand perforated or slotted pipe; SCREEN = Manufactured device designed to maintain the wall of the borehole and allow ground water to enter the well.

INTERVAL = The depth, in feet, from the top to the bottom of the interval that is open to the well.

WAT QUAL = Water Quality: a word to describe the relative quality of the well water such as GOOD, FAIR, BAD, LIME, IRON, SULFUR, SALT, OIL, GAS, OTHER.

GEO FORM = Name of the geologic formation tapped by the well (not generally reported).

LATITUDE = Latitude of well site in degrees, minutes, and seconds.

LONGITUDE = Longitude of well site in degrees, minutes, and seconds.

A/C = Accuracy Code for latitude and longitude: S = Nearest second; F = nearest 15 seconds; T = nearest 30 seconds; M = nearest minute; Blank = nearest 2.5 minutes.

LOG = Refers to availability of drillers log: Y = yes; N = no.

DRILLER = License number of driller who supervised construction of the well. Names provided upon request.

USE = Purpose for which the well was constructed: HOME = residential; COMM = commercial; etc.

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS ON THE CARDWELL-MOUNTAIN QUADRANGLE (0328NW) TN.

QUAD / NTH COUNTY	WELL NUM REG NUM	OWNER'S NAME LOCATION ROAD	COMP DATE INSPT DATE	TOT DEPTH AQ DEPTH	TOT YIELD STAT LEVEL	CSE DEPTH CSE TYPE	WELL FINISH INTERVAL	WAT QUAL TAG NUM	LATITUDE LONGITUDE	A/C LOG	DRILLER USE
0328NW 1 WARREN	17700694	BROWN_____GARY FAULKNER SPRING	04/07/1986 / /	105 89	15 76	78 STEEL	OPEN 78 - 105	OTHR	- - - -	 Y	00008 HOME
0328NW 1 WARREN	91000083	CRODY_____JAME GEORGE TR	12/01/1990 / /	111 100	10 95	54 STEEL	 -- - --	GOOD	- - - -	 Y	00600 HOME
0328NW 1 WARREN	17700689	GRIBBLE_____LARR HWY #70	06/06/1985 / /	185 120	10 70	51 STEEL	OPEN 51 - 185	OTHR	- - - -	 Y	00008 COMM
0328NW 1 WARREN	17700685	JOHNSON_____SHEL PEYON HILL	09/23/1985 / /	105 65	5 70	66 STEEL	OPEN 66 - 105	OTHR	- - - -	 Y	00008 HOME
0328NW 2 WARREN	92002943	EASTSIDE NURSERY HWY 70	07/13/1992 / /	145 80	40 42	62 STEEL	OPEN 62 - 145	OTHR	- - - -	 Y	00068 IRR
0328NW 2 WARREN	17700038	GRIBBLE A	12/19/1963 / /	184 184	7 --	79 STEEL	 -- - --		35-44-30 85-41-38	S 	00049 HOME
0328NW 2 WARREN	91003523	GRIBBLE_____LARR HWY 70S	08/27/1991 / /	145 125	80 80	76 STEEL	OPEN 76 - 145	OTHR	- - - -	 Y	00068 IRR
0328NW 2 WARREN	90002389	GRIBBLE_____NEWT SUNNY VALD DR	07/06/1990 / /	63 39	100 3	53 STEEL	OPEN 54 - 63	OTHR	- - - -	 Y	00068 IRR
0328NW 2 WARREN	17700037	GRIFFLE R	01/21/1964 / /	192 --	51 174	77 STEEL	 -- - --	GOOD	35-44-37 85-41-33	S 	00049 HOME
0328NW 2 WARREN	92002944	JIM SLATTEN NURSERY HWY 288	07/14/1992 / /	227 145	10 100	62 STEEL	OPEN 62 - 227	OTHR	- - - -	 Y	00068 IRR
0328NW 2 WARREN	17700846	MASON_____CHRI MILK RD	10/29/1988 / /	188 100	2 80	29 STEEL	OPEN 29 - 188	FAIR	- - - -	 Y	00600 FARM
0328NW 2 WARREN	93000498	MASON_____CHRI MIKE RD	09/11/1992 / /	225 115	5 90	84 STEEL	OPEN 84 - 225	H2S	- - - -	 Y	00008 FARM
0328NW 2 WARREN	93003660	TENNESSEE STATE CRO CADALLIC LAYNE	03/17/1993 / /	250 --	0 0	33 STEEL	OPEN 33 - 250	OTHR	- - - -	 Y	00008 IRR
0328NW 2 WARREN	93003661	TENNESSEE STATE CRO CADALLIC LAYNE	03/12/1993 / /	250 65	29 50	44 STEEL	SLOT 44 - 250	H2S	- - - -	 Y	00008 IRR
0328NW 2 WARREN	93003662	TENNESSEE STATE CRO CADALLIC LAYNE	03/11/1993 / /	250 45	29 35	44 STEEL	OPEN 44 - 250	GOOD	- - - -	 Y	00008 IRR
0328NW 2 WARREN	92002693	WALKER_____LARR HWY 30	04/30/1992 / /	165 105	60 80	77 STEEL	OPEN 77 - 165	GOOD	- - - -	 Y	00008 IRR

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS ON THE CARDWELL-MOUNTAIN QUADRANGLE (0328NW) TN.

QUAD / NTH COUNTY	WELL NUM REG NUM	OWNER'S NAME LOCATION ROAD	COMP DATE INSPT DATE	TOT DEPTH AQ	TOT YIELD STAT LEVEL	CSE DEPTH CSE TYPE	WELL FINISH INTERVAL	WAT QUAL TAG NUM	LATITUDE LONGITUDE	A/C LOG	DRILLER USE
0328NW 3	17700033	FITZGERALD	02/15/1964	78	400	57		GOOD	35-43-20	S	00180
WARREN			/ /	60	55	STEEL	-- - --		85-39-46		HOME
0328NW 3	17700706	MCDOWELL_____WILB	09/30/1986	79	10	37		GOOD	- -		00600
WARREN		DARK HOLLOW	/ /	60	64	STEEL	37 - 79		- -	Y	HOME
0328NW 3	93003591	MORTONS HORTICULTUR	07/25/1993	65	9	23	OPEN	GOOD	- -		00008
WARREN		HWY 56	/ /	37	30	STEEL	23 - 65		- -	Y	IRR
0328NW 3	91001813	YOUNG_____FARR	08/30/1990	145	25	42	OPEN	UNK	- -		00008
WARREN		SPRINGS VALLEY	/ /	70	65	STEEL	42 - 145		- -	Y	IRR
0328NW 4	17700291	CARTWRIGHT O	07/00/1969	123	15	91		GOOD	35-40-11	S	00008
WARREN			/ /	115	90	STEEL	-- - --		85-43-14		FARM
0328NW 4	17700885	DAVIS_____GEOR	06/23/1989	108	1	20		GOOD	- -		00600
WARREN		188 HIGHWAY	/ /	90	90	STEEL	20 - 90		- -	Y	HOME
0328NW 4	17700053	FARRIS G	06/20/1964	111	5	82		GOOD	35-40-08	S	00180
WARREN			/ /	90	70	STEEL	-- - --		85-43-28		HOME
0328NW 4	92002682	UNIV OF TN RESEARCH	03/26/1992	225	0	49	OPEN	OTHR	35-42-26	S	00008
WARREN		CADILAC LANE	/ /	--	--	STEEL	49 - 225		85-44-39	Y	TEST
0328NW 4	92002691	UNIVERSITY OF TN RE	05/12/1992	225	12	28	OPEN	H2S	35-42-22	S	00008
WARREN		CADILAC LANE	/ /	48	40	STEEL	28 - 225		85-44-43	Y	IRR
0328NW 5	91001806	COLLIAR_____JOHN	09/21/1990	185	60	73	OPEN	H2S	- -		00008
WARREN		CARDWELL	/ /	75	70	STEEL	73 - 185		- -	Y	IRR
0328NW 5	17700232	CUTRELL E	05/30/1968	130	7	74		GOOD	35-42-25	S	00022
WARREN			/ /	120	90	STEEL	-- - --		85-42-10		HOME
0328NW 5	17700668	HALE_____E_C_	08/15/1985	143	5	69	OPEN	BAD	- -		00571
WARREN		HWY 70	/ /	130	70	STEEL	69 - 143		- -	Y	HOME
0328NW 5	17700806	LUSK_____BILL	06/28/1988	185	4	62	OPEN	GOOD	- -		00068
WARREN		MCGEE RD	/ /	155	96	STEEL	63 - 185		- -	Y	FARM
0328NW 5	17700229	MAYFIELD C	06/07/1968	145	10	64		BAD	35-42-11	S	00022
WARREN			/ /	140	100	STEEL	-- - --		85-42-14		HOME
0328NW 5	17700800	MOFFET_____BARB	06/29/1988	185	75	41	OPEN	GOOD	- -		00068
WARREN		MCGEE	/ /	95	80	STEEL	41 - 185		- -	Y	FARM
0328NW 6	17700360	FUSTON B	04/23/1971	173	8	42		GOOD	35-40-16	S	00221
WARREN			/ /	140	70	STEEL	-- - --		85-39-40		HOME

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS ON THE CARDWELL-MOUNTAIN QUADRANGLE (0328NW) TN.

QUAD / NTH COUNTY	WELL NUM REG NUM	OWNER'S NAME LOCATION ROAD	COMP DATE INSPT DATE	TOT DEPTH AQ DEPTH	TOT YIELD STAT LEVEL	CSE DEPTH CSE TYPE	WELL FINISH INTERVAL	WAT QUAL TAG NUM	LATITUDE LONGITUDE	A/C LOG	DRILLER USE
0328NW 6 WARREN	17700352	GRISSOM C	/ /19 / /	93 80	10 50	56 STEEL	-- - --	GOOD	35-42-08 85-39-13	S	 HOME
0328NW 6 WARREN	17700866	MCDOWELL_____WIL_ PLEASANT COVE	07/26/1988 / /	165 100	35 95	84 STEEL	OPEN 84 - 165	OTHR	- - - -	 Y	00008 HOME
0328NW 6 WARREN	17700220	SCHAFFER R	03/30/1968 / /	120 115	11 --	54 STEEL	-- - --		35-42-14 85-39-36	S	00055 HOME
0328NW 6 WARREN	17700693	SIMMONS_____ANTH HWY 8	03/12/1986 / /	185 70	1 72	20 STEEL	OPEN 20 - 185	GOOD	- - - -	 Y	00008 HOME
0328NW 7 WARREN	90001713	AUSTIN_____JESS #8 EAGLE NEST	06/25/1990 / /	126 27	100 --	20 STEEL	-- - --	OTHR	- - - -	 Y	00572 HOME
0328NW 7 WARREN	91000312	DYKES_____CORD HWY 8 RD	12/11/1990 / /	105 95	100 40	84 OTHER	OPEN 84 - 105	OTHR	- - - -	 Y	00068 IRR
0328NW 7 WARREN	91001743	DYKES_____CORD FAIRVIEW UNION	06/04/1991 / /	84 75	65 50	61 STEEL	OPEN 61 - 84	OTHR	- - - -	 Y	00068 IRR
0328NW 7 WARREN	90001714	GUY_____COY_ #8	06/26/1990 / /	146 80	15 --	20 STEEL	OPEN 20 - 146	OTHR	- - - -	 Y	00572 FARM
0328NW 7 WARREN	17700764	HARPER_____JESS #8	11/18/1987 / /	167 140	20 --	20 STEEL	SLOT 47 - 82	OTHR	- - - -	 Y	00572 HOME
0328NW 7 WARREN	17700763	HENNESSEE_____J_L_ #8	11/20/1987 / /	227 175	9 --	20 STEEL	OPEN 20 - 227	OTHR	- - - -	 Y	00572 HOME
0328NW 7 WARREN	17700292	HILLIS H	07/00/1969 / /	124 118	20 80	91 STEEL	-- - --	GOOD	35-38-10 85-43-05	S	00008 FARM
0328NW 7 WARREN	17700650	MILSTEAD_____LONN MT ROAD	12/23/1984 / /	205 130	5 90	20 STEEL	OPEN 20 - 225	OTHR	- - - -	 Y	00008 HOME
0328NW 7 WARREN	17700088	SPENCER M	10/30/1964 / /	84 74	10 70	34 STEEL	-- - --	GOOD	35-39-34 85-44-40	S	00217 HOME
0328NW 7 WARREN	17700836	WALKER_____RAND 56 HIGHWAY	06/30/1988 / /	82 70	10 70	23 STEEL	OPEN 23 - 82	GOOD	- - - -	 Y	00600 IRR
0328NW 7 WARREN	91001863	WRIGHT BROS CONSTRU HWY 56	07/07/1990 / /	350 140	3 145	67 STEEL	OPEN 67 - 350	H2S	- - - -	 Y	00008 IND
0328NW 7 WARREN	91001864	WRIGHT BROS CONSTRU HWY 56	07/06/1990 / /	225 145	10 60	42 STEEL	OPEN 42 - 225	H2S	- - - -	 Y	00008 IND

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS ON THE CARDWELL-MOUNTAIN QUADRANGLE (0328NW) TN.

QUAD / NTH COUNTY	WELL NUM REG NUM	OWNER'S NAME LOCATION ROAD	COMP DATE INSPT DATE	TOT DEPTH AQ DEPTH	TOT YIELD STAT LEVEL	CSE DEPTH CSE TYPE	WELL FINISH INTERVAL	WAT QUAL TAG NUM	LATITUDE LONGITUDE	A/C LOG	DRILLER USE
0328NW 7	91001865	WRIGHT BROS CONSTRU	07/05/1990	370	--	--		OTHR	- -		00008
WARREN		HWY 56	/ /	--	--	OTHER	-- - --		- -	Y	IND
0328NW 8	17700465	FULTS G	07/08/1972	123	7	38		GOOD	35-37-43	S	00221
WARREN			/ /	100	50	STEEL	-- - --		85-41-10		HOME
0328NW 8	TN001735	HARRIS WAND	/ /						35-39-25	S	
WARREN		SHELLSFORD	10/14/1989				-	001735	85-42-25		
0328NW 8	17700116	MANDREL CORP	05/00/1965	44	--	--			35-39-36	S	00167
WARREN			/ /	--	--		-- - --		85-41-21		TEST
0328NW 8	17700117	MANDREL CORP	05/00/1965	47	--	--			35-39-35	S	00167
WARREN			/ /	45	2		-- - --		85-41-20		TEST
0328NW 8	17700111	MANDREL INC CORP	06/00/1965	250	--	--			35-39-35	S	00167
WARREN			/ /	--	--		-- - --		85-41-25		TEST
0328NW 8	17700112	MANDREL INC CORP	06/00/1965	50	--	--			35-39-40	S	00167
WARREN			/ /	--	--		-- - --		85-41-25		TEST
0328NW 8	17700113	MANDREL INC CORP	06/00/1965	--	--	--			35-39-39	S	00167
WARREN			/ /	--	--		-- - --		85-41-24		TEST
0328NW 8	17700114	MANDREL INC CORP	06/00/1965	42	--	--			35-39-38	S	00167
WARREN			/ /	--	--		-- - --		85-41-23		TEST
0328NW 8	17700115	MANDREL INC CORP	06/00/1965	44	--	--			35-39-37	S	00167
WARREN			/ /	--	--		-- - --		85-41-22		TEST
0328NW 8	17700875	MYERS_COVE_NURS	07/10/1988	105	0	46	OPEN	OTHR	- -		00008
WARREN		MYERS COVE	/ /	--	0	STEEL	46 - 105		- -	Y	IRR
0328NW 8	17700876	MYERS_COVE_NUR_	07/11/1988	215	12	88	OPEN	OTHR	- -		00008
WARREN		MYERS COVE	/ /	90	90	STEEL	88 - 215		- -	Y	IRR
0328NW 8	17700729	STOKER_____RENE	06/24/1987	63	8	41	SLOT	GOOD	- -		00571
WARREN		CUMBERLAND CAVE	/ /	44	52	STEEL	41 - 63		- -	Y	HOME
0328NW 8	17700834	TURNER_____BILL	07/12/1988	78	10	62	OPEN	GOOD	- -		00600
WARREN		MYERS COVE	/ /	65	63	STEEL	62 - 78		- -	Y	HOME
0328NW 9	91002831	BLACK_____RAND	08/01/1991	249	1	20	OPEN	OTHR	- -		00572
WARREN		#8 SIDE	/ /	70	--	STEEL	20 - 249		- -	Y	HOME
0328NW 9	92002700	CANTRALL_____TERR	04/03/1992	165	2	20	OPEN	GOOD	- -		00008
WARREN		LONG MT	/ /	43	40	STEEL	20 - 165		- -	Y	HOME

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION - DIVISION OF WATER SUPPLY
RECORDS OF WATER WELLS ON THE CARDWELL-MOUNTAIN QUADRANGLE (0328NW) TN.

QUAD / NTH COUNTY	WELL NUM REG NUM	OWNER'S NAME LOCATION ROAD	COMP DATE INSPT DATE	TOT DEPTH AQ DEPTH	TOT YIELD STAT LEVEL	CSE DEPTH CSE TYPE	WELL FINISH INTERVAL	WAT QUAL TAG NUM	LATITUDE LONGITUDE	A/C LOG	DRILLER USE
0328NW 9	90000230	CAPSHAW_____JAME	11/20/1989	185	10	58	OPEN	OTHR	- -		00068
WARREN		LONG MT	/ /	120	10	STEEL	58 - 185		- -	Y	HOME
0328NW 9	17700714	CAPSHOW_____KENN	01/17/1987	215	30	20		OTHR	- -		00600
WARREN		LONG MT RD	/ /	80	80	STEEL	-- - --		- -	Y	HOME
0328NW 9	92000263	COX_____JOE_	09/05/1991	145	1	20	OPEN	FAIR	- -		00008
WARREN		HWY 8	/ /	80	80	STEEL	20 - 145		- -	Y	HOME
0328NW 9	91001744	GRIZZELL_____GREG	06/04/1991	165	4	20	OPEN	OTHR	- -		00068
WARREN		LONE MOUNTAIN	/ /	40	60	STEEL	20 - 165		- -	Y	HOME
0328NW 9	92002939	HICKS_____HOME	08/03/1992	227	1	49	OPEN	OTHR	- -		00068
WARREN		LONG MTN	/ /	125	120	STEEL	49 - 227		- -	Y	HOME
0328NW 9	92002949	HICKS_____HOME	08/04/1992	227	1	41	OPEN	OTHR	- -		00068
WARREN		LONE MOUNTAIN R	/ /	125	115	STEEL	41 - 227		- -	Y	HOME
0328NW 9	90003353	JOSLIN_____GEOR	10/19/1990	352	2	20	OPEN	IRON	- -		00572
WARREN		#8	/ /	75	--	STEEL	20 - 352		- -	Y	HOME
0328NW 9	17700641	MARTIN_____ROBE	08/18/1984	139	--	20	OPEN	GOOD	- -		00600
WARREN		LONG MOUNTAIN	/ /	80	70	STEEL	20 - 139		- -	Y	HOME
0328NW 9	92000777	PANTER_____VICK	02/05/1992	132	5	20	OPEN	GOOD	- -		00600
WARREN		NO 8 HIGHWAY	/ /	40	25	STEEL	20 - 132		- -	Y	HOME
0328NW 9	90001931	ROBERTS_____LARR	06/04/1990	150	3	20		GOOD	- -		00600
WARREN		NO 8 HIGHWAY	/ /	30	5	STEEL	-- - --		- -	Y	HOME
0328NW 9	91001764	SIMMONE_____ELBE	05/01/1991	342	--	20	OPEN	GOOD	- -		00571
WARREN		LONE MT RD	/ /	125	--	STEEL	20 - 342		- -	Y	HOME
0328NW 9	91000951	SMARTT_____JOHN	03/16/1991	150	3	20		GOOD	- -		00600
WARREN		HIGHWAY #8	/ /	50	50	STEEL	-- - --		- -	Y	HOME
0328NW 9	17700730	SMITH_____JAME	05/23/1987	163	2	69	OPEN	GOOD	- -		00571
WARREN		LONE MOUNTAIN	/ /	75	65	STEEL	69 - 163		- -	Y	HOME
0328NW 9	93000693	STOTTS LARR	12/31/1992	141	10	20	OPEN	GOOD	- -		00600
WARREN		NO 8 HWY	/ /	40	20	STEEL	20 - 141		- -	Y	HOME
0328NW 9	93004333	WALKER_____JOYC	08/15/1993	185	0	20	OPEN	GOOD	- -		00008
WARREN		LONG MT RD	/ /	85	165	STEEL	20 - 185		- -	Y	HOME

REFERENCE 14

DIRECTORY OF

TENNESSEE INDUSTRIES

1969

EXECUTIVE OFFICE—STATE OF TENNESSEE
STAFF DIVISION FOR INDUSTRIAL DEVELOPMENT
Cordell Hull Building
Nashville, Tennessee 37219

MAYNARDVILLE (668)

Union County

Union County Times (A)
Main Office: Claiborne Publishing Co., Inc., New Tazewell, Tenn.
1952
Newspaper (2711) and commercial printing (2751)
CLYDE C. LEMARR, JR., *Ed., Pub., Corp.*

McEWEN (1,150)

Humphreys County

Standard Concrete Pipe Co. (A)
Route 3 37101
1947
Concrete pipe (3272)
HARRY NICHOLSON, *Owner, Prop.*

McKENZIE (4,580)

Carroll and Weakley Counties

Brown Shoe Co. (D)
Hwy. 79 S. 38201
Main Office: Clayton, Mo.
1963
Leather and imitation material shoes (3141)
JOE HURT, *Plant Supt., Corp.*

Fitzgerald Lumber Co. (A)
211 Bell St. 38201
1959
Rough lumber and ties (2421)
C. C. FITZGERALD, *Mgr., Part.*
PAUL FITZGERALD, *P. A.*

Gaines Mfg. Co., Inc. (D)
Hwy. 79 38201
1958
Upholstered furniture (2512)
WENDELL MANNER, *Plant Mgr., Corp.*
HAROLD BLAKEMORE, *P. A.*

Keco Milling Co.—Div. Martha White Foods, Inc. (C)
P. O. Box 40 38201
Main Office: Nashville, Tenn.
1935
Dog and livestock feeds (2042) and corn meal (2041)
JERRY V. KING, *Plant Mgr., P. A., Corp.*

McKenzie Banner, The (A)
P. O. Box 100 38201
1870
Newspaper (2711) and commercial printing (2751)
KARL BARLOW AND JAMES WASHBURN, *Pub., Part.*

McKenzie Block Co. (A)
Hwy. 79 S. 38201
1955
Concrete blocks (3271) and ready-mixed concrete (3273)
N. H. HANSEN, *Pres., Corp.*

McKenzie Boat Mfg. Co. (B)
P. O. Box 10 38201
1952
Aluminum boats (3732)
J. E. GINTER, JR., *Pres., P. A., Corp.*

McKenzie Wood Products Co., Inc. (D)
Highway 79 38201
1958
Main Office: Gaines Mfg. Co., McKenzie, Tenn.
Wood furniture frames (2512)
LLOYD MCDIVITT, *Plant Mgr., Corp.*
HAROLD BLAKEMORE, *P. A.*

Southern Star Lumber Co., The (B)
420 Magnolia Ave.
P. O. Box 429 38201
1915
Hardwood lumber (2421)
ROBERT H. SMITH, *Owner, Prop.*
J. C. PALMER, *P. A.*

McKENZIE (Cont'd)

West Tennessee Dairy Products Co. (A)
922 N. Paris Pike 38201
1950
Ice cream (2024) and ice milk mix (2023)
JOHN R. PUTMAN, *Mgr., P. A., Part.*

Wilker Bros. Co., Inc. (D)
Robinsfield Rd. 38201
Main Office: New York, N. Y.
1948
Pajamas (2341) and robes (2384)
IRVING BLUMENTHAL, *Vice Pres., Corp.*
E. MINKOFF, *P. A.*

McMINNVILLE (10,479)

Warren County

Burroughs-Ross-Colville Co. (D)
P. O. Box 610 37110
1873
Wood products (2499)
W. B. WHITSON, *Pres., Gen. Mgr., Corp.*
CLYDE HARDISON, *P. A.*

Carrier Air Conditioning Co. (A)
P. O. Box 104 37110
Main Office: Carrier Corp., New York, N. Y.
1968
Commercial air conditioning units (3585)
WILLIAM E. HOOD, *Plant Mgr., Corp.*
ROBERT S. YOUNGLOVE, *P. A.*

Century Electric Co. (E)
204 Red Rd. 37110
Main Office: St. Louis, Mo.
1960
Electric motors (3621)
ROBERT J. BATHE, *Plant Mgr., Corp.*

Cumberland Lumber & Mfg. Co., Inc. (D)
P. O. Box 450 37110
1945
Hardwood flooring, moulding and trim (2426)
RAY SPIVEY, *Pres., Corp.*
HERMAN SPIVEY, *Treas., P. A.*

Dezurik Southern Corp. (D)
Belmont Dr. 37110
Main Office: Sartell, Minn.
Stainless steel industrial type valves (3494)
E. F. GRISWOLD, JR., *Plant Mgr., Corp.*
GEORGE DEARMOND, *P. A.*

Formfit Rogers (D)
919 Sparta St. 37110
Main Office: Genesco, Inc., Nashville, Tenn.
1941
Lingerie and foundation garments (2341)
R. D. ABRAMS, *Plant Mgr., Corp.*

Genesco, Inc. (D)
300 Garfield 37110
1946
Leather shoes (3141)
Main Office: Nashville, Tenn.
CLYDE MILLER, *Plant Supt., Corp.*
COLLIER SMITH, *P. A.*

Kingsboro Textile Co. (B)
Sparta St. 37110
Main Office: Genesco, Inc., Nashville, Tenn.
1965
Nylon (2221) and cotton fabrics (2211)
W. A. GOODY, *Plant Supt., Corp.*

Lambert & Lambert Stone Co., Inc., Plant 2 (A)
Viola Rd., Route 3, P. O. Box 466 37110
1965
Crushed limestone (1422) and agricultural lime (3274)
JERALD LAMBERT, *Mgr., Corp.*

REFERENCE 15

File 89-000

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

OFFICE CORRESPONDENCE

DATE: 1/21/94 TIME: 8:35 am

TO: Complaint SUBJECT: Complaint

FROM: Tim Stewart, TDSF

RE:

Person reported a very strong odor of #2 Fuel Oil or Diesel in Red Springs in McMinnville. Person indicated location on topo map (see attached).

Tim Stewart
1/21/94

All UST personnel are at conference in Gatlinburg. Receptionist at UST CO is trying to notify them (to call me).

Notified Joey Holland of UPC of situation. (8:50 am)

REFERENCE 16

	Total Housing Units	Vacant Housing Units	Total Population	Group Quarters Population	Total Households	Population In Households	Population Per Household
Knox County	143,582	9,943	335,749	12,349	133,639	323,400	2.42
Lake County	2,610	192	7,129	1,072	2,418	6,057	2.50
Lauderdale County	9,343	920	23,491	893	8,423	22,598	2.68
Lawrence County	14,229	891	35,303	311	13,338	34,992	2.62
Lewis County	3,943	410	9,247	149	3,533	9,098	2.58
Lincoln County	11,902	1,021	28,157	247	10,881	27,910	2.57
Loudon County	12,995	840	31,255	329	12,155	30,926	2.54
McMinn County	17,616	1,265	42,383	673	16,351	41,710	2.55
McNairy County	9,734	900	22,422	242	8,834	22,180	2.51
Macon County	6,879	720	15,906	89	6,159	15,817	2.57
Madison County	31,809	2,200	77,982	2,467	29,609	75,515	2.55
Marion County	10,011	796	24,860	215	9,215	24,645	2.67
Marshall County	8,909	641	21,539	291	8,268	21,248	2.57
Maury County	22,286	1,678	54,812	739	20,608	54,073	2.62
Meigs County	3,689	693	8,033	112	2,996	7,921	2.64
Monroe County	12,803	1,440	30,541	601	11,363	29,940	2.63
Montgomery County	37,233	2,888	100,498	6,982	34,345	93,516	2.72
Moore County	1,912	178	4,721	7	1,734	4,714	2.72
Morgan County	6,378	537	17,300	1,289	5,841	16,011	2.74
Obion County	13,359	947	31,717	318	12,412	31,399	2.53
Overton County	7,388	654	17,636	201	6,734	17,435	2.59
Perry County	3,225	713	6,612	152	2,512	6,460	2.57
Pickett County	2,253	467	4,548	54	1,786	4,494	2.52
Polk County	5,659	567	13,643	105	5,092	13,538	2.66
Putnam County	21,417	1,664	51,373	2,954	19,753	48,419	2.45
Rhea County	10,361	1,176	24,344	706	9,185	23,638	2.57
Roane County	20,334	1,881	47,227	480	18,453	46,747	2.53
Robertson County	15,823	1,022	41,494	449	14,801	41,045	2.77
Rutherford County	45,755	3,637	118,570	5,198	42,118	113,372	2.69
Scott County	7,122	588	18,358	169	6,534	18,189	2.78
Sequatchie County	3,570	283	8,863	85	3,287	8,778	2.67
Sevier County	24,166	4,646	51,043	649	19,520	50,394	2.58
Shelby County	327,796	24,225	826,330	23,245	303,571	803,085	2.65
Smith County	6,049	691	14,143	145	5,358	13,998	2.61
Stewart County	4,384	706	9,479	184	3,678	9,295	2.53
Sullivan County	60,623	3,894	143,596	2,147	56,729	141,449	2.49
Sumner County	39,807	2,957	103,281	1,216	36,850	102,065	2.77
Tipton County	14,071	1,038	37,568	267	13,033	37,301	2.86
Trousdale County	2,537	276	5,920	125	2,261	5,795	2.56
Unicoi County	7,076	455	16,549	231	6,621	16,318	2.46
Union County	5,696	764	13,694	121	4,932	13,573	2.75
Van Buren County	2,001	202	4,846	5	1,799	4,841	2.69
Warren County	13,802	1,121	32,992	395	12,681	32,597	2.57
Washington County	38,378	2,555	92,315	4,424	35,823	87,891	2.45
Wayne County	5,741	567	13,935	226	5,174	13,709	2.65
Weakley County	12,857	865	31,972	2,403	11,992	29,569	2.47
White County	8,369	647	20,090	210	7,722	19,880	2.57
Williamson County	29,875	1,947	81,021	713	27,928	80,308	2.88
Wilson County	26,198	2,128	67,675	565	24,070	67,110	2.79

Source: U. S. Bureau of the Census

Printout prepared March 18, 1991 by the Tennessee State Planning Office

REFERENCE 17

HAZARDOUS CHEMICALS DATA BOOK

Second Edition

Edited by

G. Weiss

NOYES DATA CORPORATION

Park Ridge, New Jersey, U.S.A.

ASPHALT BLENDING STOCKS: ROOFERS FLUX

ARF

Common Synonyms

Liquid asphalt
Asphaltum: Running oil
Road oil; residual oil
Petroleum tailings
Dust-laying oil
Asphaltum oil

Oily liquid (generally heated) Dark brown to black Tar odor

May float or sink in water. Rubbery solid is produced when cooled

Stop discharge if possible
Call fire department
Avoid contact with liquid
Isolate and remove discharged material
Notify local health and pollution control agencies

Fire

Combustible
Extinguish with water, dry chemical, foam, or carbon dioxide
Cool exposed containers with water

Exposure

CALL FOR MEDICAL AID

LIQUID
Will burn skin and eyes
Harmful if swallowed
Flush affected areas with plenty of water
IF IN EYES, hold eyelids open and flush with plenty of water
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk
DO NOT INDUCE VOMITING

Water Pollution

Effect of low concentrations on aquatic life is unknown
FOULING TO SHORELINE
May be dangerous if it enters water intakes
Notify local health and pollution control officials
Notify operators of nearby water intakes

1. RESPONSE TO DISCHARGE

(See Response Methods Handbook)

Mechanical containment
Chemical and physical treatment

2. LABEL

2.1 **Category:** None
2.2 **Class:** Not pertinent

3. CHEMICAL DESIGNATIONS

3.1 **CG Compatibility Class:** Miscellaneous Hydrocarbon Mixtures
3.2 **Formula:** Not pertinent
3.3 **IMO/UN Designation:** 3.2/1999, 3.3/1999
3.4 **DOT ID No.:** 1999
3.5 **CAS Registry No.:** Data not available

4. OBSERVABLE CHARACTERISTICS

4.1 **Physical State (as shipped):** Liquid
4.2 **Color:** Brown to black
4.3 **Odor:** Tarry

5. HEALTH HAZARDS

5.1 **Personal Protective Equipment:** Protective clothing, face and eye protection
5.2 **Symptoms Following Exposure:** Inhalation of vapors from semi-solid materials causes moderate irritation of nasal and upper respiratory tract passages. Aspiration causes slow onset and low degree of chemical pneumonitis with clinical symptoms of lower respiratory tract irritation. Ingestion produces irritation of gastrointestinal tract.
5.3 **Treatment of Exposure:** INHALATION OR ASPIRATION: treatment usually unnecessary. INGESTION: do NOT induce vomiting, do NOT lavage, administer 2-4 oz of olive oil and 1-2 oz of activated charcoal. EYES: wash with plenty of water. SKIN: wipe off material and wash with soap and water.
5.4 **Threshold Limit Value:** 5 mg/m³
5.5 **Short Term Inhalation Limits:** Data not available
5.6 **Toxicity by Ingestion:** Grade 2, LD_{50} = 0.5 to 5 g/kg
5.7 **Late Toxicity:** None observed
5.8 **Vapor (Gas) Irritant Characteristics:** Vapors cause irritation of eyes or respiratory system if present in high concentrations. The effect is temporary.
5.9 **Liquid or Solid Irritant Characteristics:** Causes smarting of the skin and first-degree burns on short exposure, may cause secondary burns on long exposure.
5.10 **Odor Threshold:** Data not available
5.11 **IDLH Value:** Data not available

6. FIRE HAZARDS

6.1 **Flash Point:** 300-550°F C.C.
6.2 **Flammable Limits in Air:** Not pertinent
6.3 **Fire Extinguishing Agents:** Water, foam, dry chemical or carbon dioxide
6.4 **Fire Extinguishing Agents Not to be Used:** Water or foam may cause frothing
6.5 **Special Hazards of Combustion Products:** Not pertinent
6.6 **Behavior in Fire:** Not pertinent
6.7 **Ignition Temperature:** 400-700°F
6.8 **Electrical Hazard:** Not pertinent
6.9 **Burning Rate:** Data not available
6.10 **Adiabatic Flame Temperature:** Data not available
6.11 **Stoichiometric Air to Fuel Ratio:** Data not available
6.12 **Flame Temperature:** Data not available

7. CHEMICAL REACTIVITY

7.1 **Reactivity With Water:** No reaction
7.2 **Reactivity with Common Materials:** No reaction
7.3 **Stability During Transport:** Stable
7.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
7.5 **Polymerization:** Not pertinent
7.6 **Inhibitor of Polymerization:** Not pertinent
7.7 **Molar Ratio (Reactant to Product):** Data not available
7.8 **Reactivity Group:** 33

8. WATER POLLUTION

8.1 **Aquatic Toxicity:** Data not available
8.2 **Waterfowl Toxicity:** Data not available
8.3 **Biological Oxygen Demand (BOD):** Data not available
8.4 **Food Chain Concentration Potential:** Data not available

9. SHIPPING INFORMATION

9.1 **Grades of Purity:** Data not available
9.2 **Storage Temperature:** Elevated
9.3 **Inert Atmosphere:** No requirement
9.4 **Venting:** Open (flame arrester)

10. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook)

A-T-U

11. HAZARD CLASSIFICATIONS

11.1 **Code of Federal Regulations:** Not listed
11.2 **NAS Hazard Rating for Bulk Water Transportation:**

Category	Rating
Fire	1
Health	
Vapor Irritant	1
Liquid or Solid Irritant	2
Poisons	1
Water Pollution	
Human Toxicity	1
Aquatic Toxicity	0
Aesthetic Effect	1
Reactivity	
Other Chemicals	4
Water	0
Self Reaction	0

11.3 **NFPA Hazard Classification:**

Category	Classification
Health Hazard (Blue)	0
Flammability (Red)	1
Reactivity (Yellow)	0

12. PHYSICAL AND CHEMICAL PROPERTIES

12.1 **Physical State at 15°C and 1 atm:** Liquid
12.2 **Molecular Weight:** Not pertinent
12.3 **Boiling Point at 1 atm:** Not pertinent
12.4 **Freezing Point:** 20 to 110°F = -7 to 43°C = 266 to 316°K
12.5 **Critical Temperature:** Not pertinent
12.6 **Critical Pressure:** Not pertinent
12.7 **Specific Gravity:** (est.) 1.11 at 50°C (liquid)
12.8 **Liquid Surface Tension:** Data not available
12.9 **Liquid Water Interfacial Tension:** Data not available
12.10 **Vapor (Gas) Specific Gravity:** Not pertinent
12.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent
12.12 **Latent Heat of Vaporization:** Not pertinent
12.13 **Heat of Combustion:** Data not available
12.14 **Heat of Decomposition:** Not pertinent
12.15 **Heat of Solution:** Not pertinent
12.16 **Heat of Polymerization:** Not pertinent
12.25 **Heat of Fusion:** Data not available
12.26 **Limiting Value:** Data not available
12.27 **Reid Vapor Pressure:** Data not available

NOTES

REFERENCE 18

Date/Time of Photo: March 23, 1994
Photo Taken by: Tim Stewart
Location/Name: Cumberland Lumber Co.
File # 71-508
Persons Present: Tim Stewart

Remarks: Photo taken facing east. Shows drums on concrete pad next to the northern side of the building on the Cumberland Lumber Company lot. Red Spring is back behind telephone pole.

Signature: John Kuja 5/1/95

Date/Time of Photo: March 23, 1994
Photo Taken by: Tim Stewart
Location/Name: Cumberland Lumber Co.
File # 71-508
Persons Present: Tim Stewart

Remarks: Photo taken facing northeast. Orange color of Red Spring shown in photo.

Signature: John Kuja 5/1/95

Date/Time of Photo: March 23, 1994
Photo Taken by: Tim Stewart
Location/Name: Cumberland Lumber Co.
File # 71-508
Persons Present: Tim Stewart

Remarks: Photo taken facing east. Drums on concrete pad next to the northern side of the building on the Cumberland Lumber Company lot.

Signature: John Kyin 5/1/95

REFERENCE 19

DRINKING WATER REGULATIONS

AND HEALTH ADVISORIES

by

Office of Water
U.S. Environmental Protection Agency
Washington, D.C.
202-260-7571

SAFE DRINKING WATER HOTLINE
1-800-426-4791
Monday thru Friday, 8:30 AM to 5:00 PM EST

April 1992

LEGEND

A... viations column descriptions are:

MCLG - Maximum Contaminant Level Goal. A non-enforceable concentration of a drinking water contaminant that is protective of adverse human health effects and allows an adequate margin of safety.

MCL - Maximum Contaminant Level. Maximum permissible level of a contaminant in water which is delivered to any user of a public water system.

RfD - Reference Dose. An estimate of a daily exposure to the human population that is likely to be without appreciable risk of deleterious effects over a lifetime.

DWEL - Drinking Water Equivalent Level. A lifetime exposure concentration protective of adverse, non-cancer health effects, that assumes all of the exposure to a contaminant is from a drinking water source.

(*) The codes for the Status Reg and Status HA columns are as follows:

F - final
D - draft
L - listed for regulation
P - proposed (Phase II and V proposals)
 - tentative

Other codes found in the table include the following:

NA - not applicable
PS - performance standard 0.5 NTU - 1.0 NTU
TT - treatment technique

** - No more than 5% of the samples per month may be positive. For systems collecting fewer than 40 samples/month, no more than 1 sample per month may be positive.

*** - guidance

 - Large discrepancies between Lifetime and Longer-term HA values may occur because of the Agency's conservative policies, especially with regard to carcinogenicity, relative source contribution, and less than lifetime exposures in chronic toxicity testing. These factors can result in a cumulative UF (uncertainty factor) of 10 to 1000 when calculating a Lifetime HA.

Chemical abbreviations include the following:

PAH - polycyclic aromated hydrocarbon
... - ethylene dibromide
PAE - phthalate acid ester
PCBs - polychlorinated biphenyls
THM - trihalomethane
DBCP - dibromochloropropane

Chemicals	Standards: Status Reg.*	MCLG (mg/l)	MCL (mg/l)	Health Advisories: Status HA*	10-kg Child: One-day mg/l	Ten-day mg/l	Longer-term mg/l	70-kg Adult: Longer-term mg/l	RfD mg/kg/day	DWEL mg/l	Lifetime mg/l	mg/l at 10^{-4} Cancer Risk	Cancer Group
ORGANICS													
Acenaphthene	-	-	-	-	-	-	-	-	0.06	-	-	-	-
Acifluorfen	-	-	-	F	2	2	0.1	0.4	0.013	0.4	-	0.1	B2
Acrylamide	F	zero	TT	F	1.5	0.3	0.02	0.07	0.0002	0.007	-	0.001	B2
Acrylonitrile	L	-	-	D	0.02	0.02	0.001	0.004	0.0001	0.004	-	0.007	B1
Adipates (diethylhexyl)	P	0.5	0.5	-	-	-	-	-	0.7	20	0.5	-	C
Alachlor	F	zero	0.002	F	0.1	0.1	-	-	0.01	0.4	-	0.04	B2
Aldicarb	F	0.001	0.003	F	-	-	-	-	0.0002	0.004	0.001	-	D
Aldicarb sulfone	F	0.001	*0.002*	F	-	-	-	-	*0.0002*	0.004	0.001	-	D
Aldicarb sulfoxide	F	0.001	*0.004*	F	-	-	-	-	0.0002	0.004	0.001	-	D
Aldrin	-	-	-	D	0.0003	0.0003	0.0003	0.0003	0.00003	0.001	-	0.0002	B2
Ametryn	-	-	-	F	9	9	0.9	3	0.009	0.3	0.06	-	D
Ammonium Sulfamate	-	-	-	F	20	20	20	80	0.28	8	2	-	D
Anthracene (PAH)	-	-	-	-	-	-	-	-	0.3	-	-	-	D
Atrazine	F	0.003	0.003	F	0.1	0.1	0.05	0.2	0.005	0.2	0.003	-	C
Baygon	-	-	-	F	0.04	0.04	0.04	0.1	0.004	0.1	0.003	-	C
Bentazon	L	-	-	F	0.3	0.3	0.3	0.9	0.0025	0.09	0.02	-	D
Benz(a)anthracene (PAH)	P	zero	0.0001	-	-	-	-	-	-	-	-	-	B2
Benzene	F	zero	0.005	F	0.2	0.2	-	-	-	-	-	0.1	A
Benzo(a)pyrene (PAH)	P	zero	0.0002	-	-	-	-	-	-	-	-	-	B2*
Benzo(b)fluoranthene (PAH)	P	zero	0.0002	-	-	-	-	-	-	-	-	-	B2
Benzo(g,h,i)perylene (PAH)	-	-	-	-	-	-	-	-	-	-	-	-	D
Benzo(k)fluoranthene (PAH)	P	zero	0.0002	-	-	-	-	-	-	-	-	-	B2
bis-2-Chloroisopropyl ether	-	-	-	F	4	4	4	13	0.04	1	0.3	-	D
Bromacil	L	-	-	F	5	5	3	9	0.13	5	0.09	-	C
Bromobenzene	L	-	-	D	-	-	-	-	-	-	-	-	-

* Under review.

NOTE: Anthracene and Benzo(g,h,i)perylene -- not proposed in Phase V.

CHANGES FROM THE LAST VERSION ARE NOTED IN ITALIC AND BOLD FACE PRINT.

Chemicals	Standards: Status Reg.*	MCLG (mg/l)	MCL (mg/l)	Health Advisories: Status HA*	10-kg Child: One-day mg/l	Ten-day mg/l	Longer-term mg/l	70-kg Adult: Longer-term mg/l	RfD mg/kg/day	DWEL mg/l	Lifetime mg/l	mg/l at 10^{-4} Cancer Risk	Cancer Group
Bromochloroacetonitrile	L	-	-	D	-	-	-	-	-	-	-	-	-
Bromochloromethane	-	-	-	F	50	1	1	5	0.013	0.5	0.09	-	-
Bromodichloromethane (THM)	L	-	0.1	D	7	7	4	13	0.02	*0.7*	-	*0.14*	B2
Bromoform (THM)	L	-	0.1	D	5	2	2	6	0.02	*0.7*	-	0.4	B2
Bromomethane	L	-	-	F	0.1	0.1	0.1	0.5	0.001	0.05	0.01	-	D
Butyl benzyl phthalate (PAE)	P	zero	0.1	-	-	-	-	-	0.2	6	-	-	C
Butylate	-	-	-	F	2	2	1	4	0.05	2	0.35	-	D
Butylbenzene n-	-	-	-	D	-	-	-	-	-	-	-	-	-
Butylbenzene sec-	-	-	-	D	-	-	-	-	-	-	-	-	-
Butylbenzene tert-	-	-	-	D	-	-	-	-	-	-	-	-	-
Carbaryl	-	-	-	F	1	1	1	1	0.1	4	0.7	-	D
Carbofuran	F	0.04	0.04	F	0.05	0.05	0.05	0.2	0.005	0.2	0.04	-	E
Carbon Tetrachloride	F	zero	0.005	F	4	0.2	0.07	0.3	0.0007	0.03	-	0.03	B2
Carboxin	-	-	-	F	1	1	1	4	0.1	4	0.7	-	D
Chloral Hydrate	L	-	-	D	7	1.4	0.16	0.56	0.0016	0.056	0.045	-	-
Chloramben	-	-	-	F	3	3	0.2	0.5	0.015	0.5	0.1	-	D
Chlordane	F	zero	0.002	F	0.06	0.06	-	-	0.00006	0.002	-	0.003	B2
Chlorodibromomethane (THM)	L	-	0.1	D	7	7	2	8	0.02	0.7	*0.06*	-	C
Chloroethane	L	-	-	D	-	-	-	-	-	-	-	-	-
Chloroform (THM)	L	-	0.1	D	4	4	0.1	*0.4*	0.01	*0.4*	-	0.6	B2
Chloromethane	L	-	-	F	9	0.4	0.4	1	0.004	0.1	0.003	-	C
Chlorophenol (2-)	-	-	-	D	0.05	0.05	0.05	0.2	0.005	0.2	0.04	-	D
p-Chlorophenyl methyl sulfide/sulfone/sulfoxide	-	-	-	D	-	-	-	-	-	-	-	-	D
Chloropicrin	L	-	-	-	-	-	-	-	-	-	-	-	-
Chlorothalonil	-	-	-	F	0.2	0.2	0.2	0.5	0.015	0.5	-	0.15	B2
Chlorotoluene o-	L	-	-	F	2	2	2	7	0.02	0.7	0.1	-	D
Chlorotoluene p-	L	-	-	F	2	2	2	7	0.02	0.7	0.1	-	D
Chlorpyrifos	-	-	-	D	0.03	0.03	0.03	0.1	0.003	0.1	0.02	-	D
Chrysene (PAH)	P	zero	0.0002	-	-	-	-	-	-	-	-	-	B2
Cyanazine	L	-	-	F	0.1	0.1	0.02	0.07	0.002*	0.07*	0.001	-	C

* Under review. NOTE: Chrysene was proposed in second option.

Chemicals	Standards: Status Reg.*	MCLG (mg/l)	MCL (mg/l)	Health Advisories: Status HA*	10-kg Child: One-day mg/l	Ten-day mg/l	Longer-term mg/l	70-kg Adult: Longer-term mg/l	RfD mg/kg/day	DWEL mg/l	Lifetime mg/l	mg/l at 10^{-4} Cancer Risk	Cancer Group
Cyanogen Chloride	L	-	-	-	-	-	-	-	-	-	-	-	-
Cymene p-	-	-	-	D	-	-	-	-	-	-	-	-	-
2,4-D	F	0.07	0.07	F	1	0.3	0.1	0.4	0.01	0.4	0.07	-	D
DCPA (Dacthal)	L	-	-	F	80	80	5	20	0.5	20	4	-	D
Dalapon	P	0.2	0.2	F	3	3	0.3	0.9	0.026	0.9	0.2	-	D
Di(2-ethylhexyl)adipate	P	0.4	0.4	-	20	20	20	80	0.6	20	0.4	3	C
Diazinon	-	-	-	F	0.02	0.02	0.005	0.02	0.00009	0.003	0.0006	-	E
Dibenz(a,h)anthracene (PAH)	P	zero	0.0003	-	-	-	-	-	-	-	-	-	B2
Dibromoacetonitrile	L	-	-	D	2	2	2	8	0.02	0.8	0.02	-	C
Dibromochloropropane (DBCP)	F	zero	0.0002	F	0.2	0.05	-	-	-	-	-	0.003	B2
Dibromomethane	L	-	-	-	-	-	-	-	-	-	-	-	D
Dibutyl phthalate (PAE)	-	-	-	-	-	-	-	-	0.1	4	-	-	D
Dicamba	L	-	-	F	0.3	0.3	0.3	1	0.03	1	0.2	-	D
Dichloroacetaldehyde	L	-	-	D	-	-	-	-	-	-	-	-	-
Dichloroacetic acid	L	-	-	D	-	-	-	-	-	-	-	-	-
Dichloroacetonitrile	L	-	-	D	1	1	0.8	3	0.008	0.3	0.008	-	C
Dichlorobenzene o-	F	0.6	0.6	F	9	9	9	30	0.9	3	0.6	-	D
Dichlorobenzene m- *	F	0.6	0.6	F	9	9	9	30	0.9	3	0.6	-	D
Dichlorobenzene p-	F	0.075	0.075	F	10	10	10	40	0.1	4	0.075	-	C
Dichlorodifluoromethane	L	-	-	F	40	40	9	30	0.2	5	1	-	D
Dichloroethane (1,1-)	L	-	-	D	-	-	-	-	-	-	-	-	-
Dichloroethane (1,2-)	F	zero	0.005	F	0.7	0.7	0.7	2.6	-	-	-	0.04	B2
Dichloroethylene (1,1-)	F	0.007	0.007	F	2	1	1	4	0.009	0.4	0.007	-	C
Dichloroethylene (cis-1,2-)	F	0.07	0.07	F	4	3	3	11	0.01	0.4	0.07	-	D
Dichloroethylene (trans-1,2-)	F	0.1	0.1	F	20	2	2	6	0.02	0.6	0.1	-	D
Dichloromethane	P	zero	0.005	F	10	2	-	-	0.06	2	-	0.5	B2
Dichlorophenol (2,4-)	-	-	-	D	0.03	0.03	0.03	0.1	0.003	0.1	0.02	-	D
Dichloropropane (1,1-)	-	-	-	D	-	-	-	-	-	-	-	-	-
Dichloropropane (1,2-)	F	zero	0.005	F	-	0.09	-	-	-	-	-	0.05	B2
Dichloropropane (1,3-)	L	-	-	D	-	-	-	-	-	-	-	-	-
Dichloropropane (2,2-)	L	-	-	D	-	-	-	-	-	-	-	-	-

* *The values for m-dichlorobenzene are based on data for o-dichlorobenzene*

Chemicals	Standards: Status Reg.*	Standards: MCLG (mg/l)	Standards: MCL (mg/l)	Health Advisories: Status HA*	10-kg Child: One-day mg/l	10-kg Child: Ten-day mg/l	10-kg Child: Longer-term mg/l	70-kg Adult: Longer-term mg/l	70-kg Adult: RfD mg/kg/day	70-kg Adult: DWEL mg/l	70-kg Adult: Lifetime mg/l	mg/l at 10^{-4} Cancer Risk	Cancer Group
Dichloropropene (1,1-)	L	-	-	D	-	-	-	-	-	-	-	-	-
Dichloropropene (1,3-)	L	-	-	F	0.03	0.03	0.03	0.1	0.0003	0.01	-	0.02	B2
Dieldrin	-	-	-	F	0.0005	0.0005	0.0005	0.002	0.00005	0.002	-	0.0002	B2
Diethyl phthalate (PAE)	-	-	-	D	-	-	-	-	0.8	30	5	-	D
Diethylene glycol dinitrate	-	-	-	D	-	-	-	-	-	-	-	-	-
Diethylhexyl phthalate (PAE)	P	zero	0.004	D	-	-	-	-	0.02	0.7	-	0.3	B2*
Diisopropyl methylphosphonate	-	-	-	F	8	8	8	30	0.08	3	0.6	-	D
Dimethrin	-	-	-	F	10	10	10	40	0.3	10	2	-	D
Dimethyl methylphosphonate	-	-	-	D	-	-	-	-	0.2	-	-	-	C
Dimethyl phthlate (PAE)	-	-	-	-	-	-	-	-	-	-	-	-	D
1,3-Dinitrobenzene	-	-	-	F	0.04	0.04	0.04	0.14	0.0001	0.005	0.001	-	D
Dinitrotoluene (2,4-)	L	-	-	*F*	***0.50***	***0.50***	***0.30***	***1.0***	***0.002***	***0.1***	-	***5.0***	B2
Dinitrotoluene (2,6)	L	-	-	*F*	***0.40***	***0.40***	***0.40***	***1.0***	***0.001***	***0.04***	-	***5.0***	B2
Dinoseb	P	0.007	0.007	F	0.3	0.3	0.01	0.04	0.001	0.04	0.007	-	D
Dioxane p-	-	-	-	F	4	0.4	-	-	-	-	-	0.7	B2
Diphenamid	-	-	-	F	0.3	0.3	0.3	1	0.03	1	0.2	-	D
Diquat	P	0.02	0.02	-	-	-	-	-	0.0022	0.08	0.02	-	D
Disulfoton	-	-	-	F	0.01	0.01	0.003	0.003	0.00004	0.001	0.0003	-	E
1,4-Dithiane	-	-	-	D	-	-	-	-	-	-	-	-	D
Diuron	-	-	-	F	1	1	0.3	0.9	0.002	0.07	0.01	-	D
Endothall	P	0.1	0.1	F	0.8	0.8	0.2	0.2	0.02	0.7	0.1	-	D
Endrin	P	0.002	0.002	F	0.02	0.02	0.003	0.01	0.0003	0.01	0.002	-	D
Epichlorohydrin	F	zero	TT	F	0.1	0.1	0.07	0.07	0.002	0.07	-	0.4	B2
Ethylbenzene	F	0.7	0.7	F	30	3	1	3	0.1	3	0.7	-	D
Ethylene dibromide (EDB)	F	zero	0.00005	F	0.008	0.008	-	-	-	-	-	0.00004	B2
Ethylene glycol	-	-	-	F	20	6	6	20	2	40	7	-	D
ETU	L	-	-	F	0.3	0.3	0.1	0.4	0.00008	0.003	-	0.006**	B2
Fenamiphos	-	-	-	F	0.009	0.009	0.005	0.02	0.00025	0.009	0.002	-	D
Fluometuron	-	-	-	F	2	2	2	5	0.013	0.4	0.09	-	D
Fluorene (PAH)	-	-	-	-	-	-	-	-	0.04	-	-	-	D

* Under review. ** Not verified yet.

Chemicals	Standards: Status Reg.*	MCLG (mg/l)	MCL (mg/l)	Health Advisories: Status HA*	10-kg Child: One-day mg/l	Ten-day mg/l	Longer-term mg/l	70-kg Adult: Longer-term mg/l	RfD mg/kg/day	DWEL mg/l	Lifetime mg/l	mg/l at 10^{-4} Cancer Risk	Cancer Group
Fluorotrichloromethane	L	-	-	F	7	7	3	10	0.3	10	2	-	D
Fog Oil	-	-	-	D	-	-	-	-	-	-	-	-	-
Fonofos	-	-	-	F	0.02	0.02	0.02	0.07	0.002	0.07	0.01	-	D
Formaldehyde	-	-	-	D	10	5	5	20	0.15	5	1	-	B1
Gasoline, unleaded (benzene)	-	-	-	D	-	-	-	-	-	-	0.005	-	-
Glyphosate	P	0.7	0.7	F	20	20	1	1	0.1	4	0.7	-	D
Heptachlor	F	zero	0.0004	F	0.01	0.01	0.005	0.005	0.0005	0.02	-	0.0008	B2
Heptachlor epoxide	F	zero	0.0002	F	0.01	-	0.0001	0.0001	1.3E-05	0.0004	-	0.0004	B2
Hexachlorobenzene	P	zero	0.001	F	0.05	0.05	0.05	0.2	0.0008	0.03	-	0.002	B2
Hexachlorobutadiene	L	-	-	F	0.3	0.3	0.1	0.4	0.002	0.07	0.001	-	C
Hexachlorocyclopentadiene	P	0.05	0.05	-	-	-	-	-	0.007	0.2	-	-	D
Hexachloroethane	L	-	-	F	5	5	0.1	0.5	0.001	0.04	0.001	-	C
Hexane (n-)	-	-	-	F	10	4	4	10	-	-	-	-	D
Hexazinone	-	-	-	F	3	3	3	9	0.033	1	0.2	-	D
HMX	-	-	-	F	5	5	5	20	0.05	2	0.4	-	D
Hypochlorite	L	-	-	-	-	-	-	-	-	-	-	-	-
Hypochlorous acid	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3,-c,d)pyrene (PAH)	P	zero	0.0004	D	-	-	-	-	-	-	-	-	B2
Isophorone	L	-	-	D	15	15	15	15	0.2	7	0.1	-	C
Isopropyl methylphosphonate	-	-	-	D	*30*	*30*	*30*	*100*	0.1	*4.0*	*0.7*	-	D
Isopropylbenzene	-	-	-	D	-	-	-	-	-	-	-	-	-
Lindane	F	2E-4	0.0002	F	1	1	0.03	0.1	0.0003	0.01	0.0002	-	C
Malathion	-	-	-	D	0.2	0.2	0.2	0.8	0.02	0.8	0.2	-	D
Maleic hydrazide	-	-	-	F	10	10	5	20	0.5	20	4	-	D
MCPA	-	-	-	F	0.1	0.1	0.1	0.4	0.0015	0.05	0.01	-	E
Methomyl	L	-	-	F	0.3	0.3	0.3	0.3	0.025	0.9	0.2	-	D
Methoxychlor	F	0.04	0.04	F	*0.05*	*0.05*	*0.05*	0.2	0.005	0.2	0.04	-	D
Methyl ethyl ketone	L	-	-	F	80	8	3	9	0.00005	0.9	0.2	-	D
Methyl parathion	-	-	-	F	0.3	0.3	0.03	0.1	0.00025	0.009	0.002	-	D
Methyl tert butyl ether	L	-	-	D	3	3	0.5	2	0.005	0.2	0.04	-	D

Chemicals	Standards: Status Reg.*	MCLG (mg/l)	MCL (mg/l)	Health Advisories: Status HA*	10-kg Child: One-day mg/l	10-kg Child: Ten-day mg/l	10-kg Child: Longer-term mg/l	70-kg Adult: Longer-term mg/l	70-kg Adult: RfD mg/kg/day	70-kg Adult: DWEL mg/l	70-kg Adult: Lifetime mg/l	mg/l at 10^{-4} Cancer Risk	Cancer Group
Metolachlor	L	-	-	F	2	2	2	5	0.15	5	0.1	-	C
Metribuzin	L	-	-	F	5	5	0.3	0.9	0.025	0.9	0.2	-	D
Monochloroacetic acid	L	-	-	D	-	-	-	-	-	-	-	-	-
Monochlorobenzene	F	0.1	0.1	F	2	2	2	7	0.02	0.7	0.1	-	D
Naphthalene	-	-	-	F	0.5	0.5	0.4	1	0.004	0.1	0.02	-	D
Nitrocellulose (non-toxic)	-	-	-	F	-	-	-	-	-	-	-	-	-
Nitroguanidine	-	-	-	F	10	10	10	40	0.1	4	0.7	-	D
Nitrophenols p-	-	-	-	D	0.8	0.8	0.8	3	0.008	0.3	0.06	-	D
Oxamyl (Vydate)	P	0.2	0.2	F	0.2	0.2	0.2	0.9	0.025	0.9	0.2	-	E
Ozone by-products	L	-	-	-	-	-	-	-	-	-	-	-	-
Paraquat	-	-	-	F	0.1	0.1	0.05	0.2	0.0045	0.2	0.03	-	E
Pentachloroethane	-	-	-	D	-	-	-	-	-	-	-	-	-
Pentachlorophenol	F	zero	0.001	F	1	0.3	0.3	1	0.03	1	-	0.03	B2
Phenanthrene (PAH)	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	-	-	-	D	6	6	6	20	0.6	20	4	-	D
Picloram	P	0.5	0.5	F	20	20	0.7	2	0.07	2	0.5	-	D
Polychlorinated byphenyls (PCBs)	F	zero	0.0005	P	-	-	-	-	-	-	-	0.0005	B2
Prometon	L	-	-	F	0.2	0.2	0.2	0.5	0.015	0.5	0.1	-	D
Pronamide	-	-	-	F	0.8	0.8	0.8	3	0.075	3	0.05	-	C
Propachlor	-	-	-	F	0.5	0.5	0.1	0.5	0.013	0.5	0.09	-	D
Propazine	-	-	-	F	1	1	0.5	2	0.02	0.7	0.01	-	C
Prooham	-	-	-	F	5	5	5	20	0.02	0.6	0.1	-	D
Propylbenzene n-	-	-	-	D	-	-	-	-	-	-	-	-	-
Pyrene (PAH)	-	-	-	-	-	-	-	-	0.03	-	-	-	D
RDX	-	-	-	F	0.1	0.1	0.1	0.4	0.003	0.1	0.002	0.03	C
Simazine	P	*0.004*	*0.004*	F	0.07	0.07	0.07	0.07	0.005	0.2	0.004	-	C
Styrene	F	0.1	0.1	F	20	2	2	7	0.2	7	0.1	-	C
2,4,5-T	L	-	-	F	0.8	0.8	0.8	1	0.01	0.35	0.07	-	D
2,3,7,8-TCDD (Dioxin)	P	zero	5E-08	F	1E-06	1E-07	1E-08	4E-08	1E-06	4E-08	-	2E-08	B2
Tebuthiuron	-	-	-	F	3	3	0.7	2	0.07	2	0.5	-	D

* Under review. NOTE: Phenanthrene -- not proposed.

Chemicals	Standards: Status Reg.*	MCLG (mg/l)	MCL (mg/l)	Health Advisories: Status HA*	10-kg Child: One-day mg/l	Ten-day mg/l	Longer-term mg/l	70-kg Adult: Longer-term mg/l	RfD mg/kg/day	DWEL mg/l	Lifetime mg/l	mg/l at 10^{-4} Cancer Risk	Cancer Group
Terbacil	-	-	-	E	0.3	0.3	0.3	0.9	0.013	0.4	0.09	-	E
Terbufos	-	-	-	E	0.005	0.005	0.001	0.005	0.00013	0.005	0.0009	-	D
Tetrachloroethane (1,1,1,2-)	L	-	-	E	2	2	0.9	3	0.03	1	0.07	0.1	C
Tetrachloroethane (1,1,2,2-)	L	-	-	D	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	F	zero	0.005	E	2	2	1	5	0.01	0.5	-	0.07	-
Tetranitromethane	-	-	-	D	-	-	-	-	-	-	-	-	-
Toluene	F	1	1	E	20	2	2	7	0.2	7	1	-	D
Toxaphene	F	zero	0.003	E	0.5	0.04	-	-	0.1	0.0035	-	0.003	B2
2,4,5-TP	F	0.05	0.05	E	0.2	0.2	0.07	0.3	0.0075	0.3	0.05	-	D
1,1,2-Trichloro-1,2,2-trifluoroethane	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroacetic acid	L	-	-	D	-	-	-	-	-	-	-	-	-
Trichloroacetonitrile	L	-	-	D	0.05	0.05	-	-	-	-	-	-	-
Trichlorobenzene (1,2,4-)	P	*0.07*	*0.07*	E	0.1	0.1	0.1	0.5	*0.01*	*0.4*	*0.07*	-	D
Trichlorobenzene (1,3,5-)	-	-	-	E	0.6	0.6	0.6	2	0.006	0.2	0.04	-	D
Trichloroethane (1,1,1-)	F	0.2	0.2	E	100	40	40	100	0.035	1	0.2	-	D
Trichloroethane (1,1,2-)	P	0.003	0.005	E	0.6	0.4	0.4	1	0.004	0.1	0.003	-	C
Trichloroethanol (2,2,2-)	L	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	F	zero	0.005	E	-	-	-	-	-	0.3	-	0.3	B2
Trichlorophenol (2,4,6-)	L	-	-	D	-	-	-	-	-	-	-	0.3	B2
Trichloropropane (1,1,1-)	-	-	-	D	-	-	-	-	-	-	-	-	-
Trichloropropane (1,2,3-)	L	-	-	E	0.6	0.6	0.6	2	0.006	0.2	0.04	-	-
Trifluralin	L	-	-	E	0.08	0.08	0.08	0.3	0.0075	0.3	0.005	-	C
Trimethylbenzene (1,2,4-)	-	-	-	D	-	-	-	-	-	-	-	-	-
Trimethylbenzene (1,3,5-)	-	-	-	D	-	-	-	-	-	-	-	-	-
Trinitroglycerol	-	-	-	E	0.005	0.005	0.005	0.005	-	-	0.005	-	-
Trinitrotoluene	-	-	-	E	0.02	0.02	0.02	0.02	0.0005	0.02	0.002	0.1	C
Vinyl chloride	F	zero	0.002	E	3	3	0.01	0.05	-	-	-	0.0015	A
White phosphorus	-	-	-	E	-	-	-	-	0.00002	0.0005	0.0001	-	D
Xylenes	F	10	10	E	40	40	40	100	2	60	10	-	D

* Under review.

Chemicals	Standards: Status Req.*	MCLG (mg/l)	MCL (mg/l)	Health Advisories: Status HA*	10-kg Child: One-day mg/l	Ten-day mg/l	Longer-term mg/l	70-kg Adult: Longer-term mg/l	RfD mg/kg/day	DWEL mg/l	Lifetime mg/l	mg/l at 10^{-4} Cancer Risk	Cancer Group
INORGANICS													
Aluminum	L	-	-	D	-	-	-	-	-	-	-	-	-
Ammonia	-	-	-	D	-	-	-	-	-	-	30	-	D
Antimony	P	0.003	0.01/0.005	D	0.015	0.015	0.015	0.015	0.0004	0.015	0.003	-	D
Arsenic	*	-	0.05	D	-	-	-	-	-	-	-	*0.002*	A
Asbestos (fibers/l > 10um length)	F	7 MFL	7 MFL	-	-	-	-	-	-	-	-	700 MFL	A
Barium	F	2	2	F	-	-	-	-	0.07	2	2	-	D
Beryllium	P	zero	0.001	D	30	30	4	20	0.005	0.2	-	0.0008	B2
Boron	L	-	-	D	4	0.9	0.9	3	0.09	3	0.6	-	D
Cadmium	F	0.005	0.005	F	0.04	0.04	0.005	0.02	0.0005	0.02	0.005	-	D
Chloramine	L	-	-	D	1	1	1	1	0.1	3.3	2.6	-	-
Chlorate	L	-	-	D	-	-	-	-	-	-	-	-	-
Chlorine	L	-	-	D	-	-	-	-	-	-	-	-	-
Chlorine dioxide	L	-	-	D	-	-	-	-	-	-	-	-	-
Chlorite	L	-	-	D	-	-	-	-	-	-	-	-	-
Chromium (total)	F	0.1	0.1	F	1	1	0.2	0.8	0.005	0.2	0.1	-	D
Cooper	P	1.3	TT**	-	-	-	-	-	-	-	-	-	D
Cyanide	P	0.2	0.2	F	0.2	0.2	0.2	0.8	0.022	0.8	0.2	-	D
Fluoride*	F	4	4	-	-	-	-	-	0.12	-	-	-	-
Lead (at tap)	F	zero	TT**	-	-	-	-	-	-	-	-	-	B2
Manganese	-	-	-	D	-	-	-	-	0.14	-	-	-	-
Mercury *(inorganic)*	F	0.002	0.002	F	-	-	-	0.002	0.0003	0.01	0.002	-	D
Molybdenum	L	-	-	D	-	-	-	-	*0.005*	*0.175*	*0.035*	-	D
Nickel	P	0.1	0.1	F	1	1	*0.5*	*1.7*	0.02	0.6	0.1	-	D
Nitrate (as N)	F	10	10	F	-	10*	-	-	1.6	-	-	-	*
Nitrite (as N)	F	1	1	F	-	1*	-	-	0.16*	-	-	-	*

* Under review.

** Copper - action level 1.3 mg/L
Lead - action level 0.015 mg/L

Chemicals	Standards: Status Reg.*	MCLG (mg/l)	MCL (mg/l)	Health Advisories: Status HA*	10-kg Child: One-day mg/l	Ten-day mg/l	Longer-term mg/l	70-kg Adult: Longer-term mg/l	RfD mg/kg/day	DWEL mg/l	Lifetime mg/l	mg/l at 10^{-4} Cancer Risk	Cancer Group
Nitrate + Nitrite (both as N)	F	10	10	F	-	-	-	-	-	-	-	-	*
Selenium	F	0.05	0.05	-	-	-	-	-	0.005	-	-	-	-
Silver	-	-	-	D	0.2	0.2	0.2	0.2	0.005	0.2	0.1	-	D
Sodium	-	-	-	D	-	-	-	-	-	20***	-	-	-
Strontium	L	-	-	D	25	25	25	90	2.5	90	17	-	D
Sulfate	P	400/500	400/500	-	-	-	-	-	-	-	-	-	-
Thallium	P	0.0005	0.002/ 0.001	D	0.007	0.007	0.007	0.02	0.00007	0.002	0.0004	-	-
Vanadium	L	-	-	D	0.03	0.03	0.03	0.11	0.003	0.11	0.02	-	D
Zinc	L	-	-	D	-	-	-	-	*0.3*	*10.5*	*2.1*	-	D
Zinc chloride *(measured as Zinc)*	L	-	-	D	-	-	-	-	*0.3*	*10.5*	*2.1*	-	D
RADIONUCLIDES													
Beta particle and photon activity (formerly man-made radionuclides)	F	zero	4 mrem	-	-	-	-	-	-	-	-	4 mrem/y	A
Gross alpha particle activity	F	zero	15 pCi/L	-	-	-	-	-	-	-	-	-	A
Radium 226/228	P	zero	20 pCi/L	-	-	-	-	-	-	-	-	22/26 pCi/l	A
Radon	P	zero	300 pCi/L	-	-	-	-	-	-	-	-	150 pCi/l	A
Uranium	P	zero	20 ug/l	-	-	-	-	-	-	-	-	170 pCi/l	A

* Under review.

*** Guidance.

Chemicals	Status	SMCLs (mg/l)
Aluminum	F	0.05 to 0.2
Chloride	F	250
Color	F	15 color units
Copper	F	1
Corrosivity	F	non-corrosive
Fluoride*	F	2
Foaming Agents	F	0.5
Hexachlorocyclopentadiene	P	0.008
Iron	F	0.3
Manganese	F	0.05
Odor	F	3 threshold odor numbers
pH	F	6.5 - 8.5
Silver	F	0.10
Sulfate	F	250
Total Dissolved Solids (TDS)	F	500
Zinc	F	5

Status Codes: P - proposed, F - final

* Under review.

MICROBIOL' Y

	Status	MCLG	MCL
Cryptosporidium	L	-	-
Giardia lamblia	F	zero	TT
Legionella	F[a]	zero	TT
Standard Plate Count	F[a]	NA	TT
Total Coliforms (after 12/31/90)	F	zero	**
Turbidity (after 12/31/90)	F	NA	PS
Viruses	F[a]	zero	TT

Key: PS, TT, F, defined as previously stated.

[a]: Final for systems using surface water; also being considered for regulation under groundwater disinfection rule.

REFERENCE 20

File: 89-506 w/s
(c.o. copy attached) BKA

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT

OFFICE CORRESPONDENCE

FROM	TO	DATE

DATE: 4/10/95 Time: 1000

TO: DSF Files

FROM: John Kizer

SUBJECT: Cumberland Hardwoods - USTs

Called Rocky Hannah to discuss weather there had been any trouble with USTs near Red Spring. He stated that there has not been and problems with Cumberland Lumber's UST's or any other storage tanks in the area that he knew about. He said the County Environmentalist told him Red Spring did not exist until after the new sewer lines had been put in. Additionally, a spring near the sewer in Riverfront Park appeared the same as Red Spring; therefore, he suspects the contamination is coming from the sanitary sewer.

John Kizer 4/10/95

FROM	DATE
TO	

PH-0001
SR 3/77

REFERENCE 21

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

OFFICE CORRESPONDENCE

DATE: 04/10/95

TIME: 1000

TO: DSF Files

SUBJECT: Underground storage tanks near Cumberland Lumber Company site

FROM: John Kizer

RE: Cumberland Lumber Co. (89-506)

Called Rocky Hannah to discuss if there had been any trouble with underground storage tanks near Red Spring. He stated that there has not been any problems with Cumberland Lumber's underground storage tanks or any other storage tanks in the area that he knew about. They intend to perform a Compliance Inspection at Cumberland Lumber later this year. He said the County Environmentalist told him Red Spring did not exist until after the new sewer lines had been put in. Additionally, a spring near the sewer in Riverfront Park looked the same as Red Spring; therefore, he suspects the contamination is coming from the sanitary sewer.

John Kizer 4/12/95

REFERENCE 22

138-547

D E E D

THIS DEED made the 24th day of July in the year 1961.

BETWEEN

GENESCO Inc., a corporation duly incorporated under the laws of the State of Tennessee with principal office in Nashville, Davidson County, Tennessee, hereinafter called the "Grantor,"

AND

W. M. JARMAN, B. H. WILLINGHAM, and H. N. CARMICHAEL, all of Nashville, Tennessee, TRUSTEES OF THE GENESCO (formerly General Shoe Corporation) EMPLOYEES RETIREMENT TRUST established by agreement between General Shoe Corporation and said Trustees dated July 6, 1945, the post office address of said Trustees being 111 Seventh Avenue, North, Nashville, Tennessee, said Trustees being hereinafter called collectively the "Grantee,"

W I T N E S S E T H:

That in consideration of $1 and other good and valuable considerations in hand paid, the receipt whereof is hereby acknowledged, the said Grantor does hereby grant and convey to the said Grantee, its successors and assigns, all the following described real estate in the Town of McMinnville, County of Warren and State of Tennessee, to wit:

A tract of land located in the first civil district of Warren County, Tennessee and located on the North side of Sparta Street (U.S. Highway 70 S.) in the Town of McMinnville, First Civil District of Warren County, Tennessee, beginning at a stake in the corner of the Cumberland Lumber & Manufacturing Co., Inc. lot, formerly the A. P. Rich lot, said stake being 8.4 feet in a northwardly direction from the center of a culvert of Tennessee Highway No. 1 (U.S. Highway 70 S.), said line of 8.4 feet from the center of the culvert runs parallel with the wing of the culvert, said culvert being constructed of concrete; thence from said beginning corner (stake) North 65 1/2 degrees East 441.5 feet to an iron pin; then North 17 degrees 28 minutes West 286.5 feet to an iron pin; thence north 59 degrees 39 minutes East 209 feet to an iron pin; thence North 49 1/2 degrees West with the line of property owned by the Town of McMinnville, 381 feet to a stake in the right-of-way of the N. C. and St. L. Rwy.; thence with the N. C. & St. L. Rwy. right-of-way South 42 1/2 degrees West 561.3 feet to an iron pin in the line of Cumberland Lumber & Manufacturing Company, Inc.; thence with said Cumberland Lumber & Manufacturing Co., Inc. line south 22 degrees 51 minutes East 422.8 feet to the place of beginning.

Together with the building, improvements and appurtenances now on said land or any part thereof.

Being the same property conveyed to Kingsboro Mills, Inc. (now Kingsboro Mills, a GENESCO division, by statutory merger effective June 23, 1961) by Deed dated January 20, 1961 of record in Book 127, page 399, Register's Office of Warren County, Tennessee.

TO HAVE AND TO HOLD said tract or parcel of land, with the estate, title and interest thereto belonging to the said Grantee, its successors and assigns, forever, in fee simple.

Grantor covenants with the said Grantee that it is lawfully seized and possessed of said tract or parcel of land, in fee simple, has a good right to convey it, and the same is unencumbered except by a certain guaranty agreement constituting a mortgage on said property, of record in Book 120, page 35, of said Register's Office, and by taxes for the year 1961 which will be paid by the Grantor.

Grantor further covenants and binds itself, and its successors, to warrant and forever defend the title to said land to the said Grantee, its successors and assigns, against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, said GENESCO Inc. has caused its corporate name to be hereto signed by its duly authorized officers, on this the 24th day of July, 1961.

GENESCO Inc.

ATTEST:

By D.D. Glaus Jr.
Vice President

Asst Secretary

STATE OF TENNESSEE,

COUNTY OF DAVIDSON.

On this the 24th day of July, 1961, before me, D.D. Glaus, Jr., a Notary Public, personally appeared J.P. SAUNDERS, who acknowledged himself to be Vice President of GENESCO Inc., a corporation, and that he as such Vice President, being authorized so to do, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by himself as Vice President.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Notary Public
In and For the County and State Aforesaid

My commission expires:

My Commission Expires July 13, 1965

STATE OF TENNESSEE, WARREN COUNTY, SS.
Received for record the 31 day of July 1961 at 9:30 o'clock A. M. Noted in Note Book 1 page 293 and Recorded in Deed Book No. 128 page
Witness my hand 7-31-61

REGISTER'S OFFICE
Fee $
By Frank B. Chastain Register

312-317

Address New Owner:	Send Tax Bills to:	Map-Parcel Numbers
Charles Earl Maybery Joyce Rose Maybery Route 10, Box 55 McMinnville, TN 37110	New Owner	158P-G-9
This instrument prepared by: Boult, Cummings, Conners & Berry (RFW) P.O. Box 198062, Nashville, Tennessee 37219		

WARRANTY DEED

FOR VALUABLE CONSIDERATION, the receipt and sufficiency of which are acknowledged, Genesco Restricted Investments Pension Trust ("Grantor") has bargained and sold, and hereby transfers and conveys to Charles Earl Maybery and wife, Joyce Rose Maybery ("Grantee"), their heirs, successors and assigns, certain land in Warren County, Tennessee, being more particularly described in Exhibit A attached hereto and incorporated herein by reference (the "Property").

TO HAVE AND TO HOLD the Property with all appurtenances, estate, title, and interest thereto belonging to Grantees, their heirs, successors and assigns, forever.

This conveyance of the Property, and all covenants and warranties contained herein, are made expressly subject to any and all liens affecting the property.

Grantor covenants with Grantees that Grantor is lawfully seized and possessed of the Property in fee simple; that

STATE OF TENNESSEE
COUNTY OF DAVIDSON

The actual consideration or value, whichever is greater, for this transfer is $69,006.00.

Edward W Graham Jr.
Affiant

Subscribed and sworn to before me this 24th day of November, 1992.

Richard A Warren
Notary Public
My Commission Expires: 11/27/93

Grantor has a good right to convey the Property; and that the Property is unencumbered except as set forth herein.

Grantor further covenants to warrant and forever defend the title to the Property to Grantees, their heirs, successors and assigns against the lawful claims of all persons.

Executed this 24th day of November, 1992.

GENESCO RESTRICTED INVESTMENTS PENSION TRUST

By: Edward W Graham Jr

Title: Chairman

This is improved property, known as 919 Sparta Street, McMinnville, TN.

To Be Transferred
DEC - 2 1992

STATE OF TENNESSEE

COUNTY OF Davidson

Personally appeared before me, Richard A Warren, Notary Public, Edward W. Graham, Jr., with whom I am personally acquainted, and who acknowledged that he executed the foregoing instrument for the purposes therein contained and who further acknowledged that he is Chairman of the Genesco Restricted Investments Pension Trust, a trust ~~corporation~~, and is authorized to execute this instrument on behalf of said corporation.

WITNESS my hand, at office, this 24th day of November, 1992.

Richard A Warren
Notary Public

My Commission Expires: 11/27/93

STATE OF TENNESSEE, WARREN COUNTY
The foregoing instrument and certificate were noted
Note Book 17, Page 181 At 11:35 O'clock A M 12-2 1992
and recorded in WD Book 272, Series ____ Page 378
State Tax Paid $255.30 Fee 1.00 Recording Fee 9.00 Total $264.30
Witness My Hand.
Receipt No. 42382
[signature]
Register

Recorded

EXHIBIT A

10-31-1992

GENESCO RESTRICTED INVESTMENTS PENSION TRUST (SURVEY)

6.53 ACRES, FIRST DISTRICT, WARREN CO., TN.

Beginning on a stake in the North margin of Sparta Street, the same being a corner of Cumberland Lumber And Manufacturing Co., Inc. lot, formerly the A. P. Rich lot, said stake being 8.4 feet in a northwardly direction from the center of a culvert of State Highway No. 1 (U. S. Highway 70 South), said line of 8.4 feet from the center of the culvert runs parallel with the wing of the culvert, said culvert being constructed of concrete, and running thence from the beginning corner North 45°30' East, 441.44 feet with the North margin of Sparta Street to an existing iron pipe; thence North 18°34' West, 289.11 feet to an existing iron pin; thence North 60°44' East, 207.49 feet to an iron stake, a corner of Town of McMinnville lot; thence North 49°45' West, 379.69 feet with the Town of McMinnville lot to an iron stake in the South right of way of Caney Fork And Western Railroad; thence South 41°11' West, 558.15 feet with the South right of way of Caney Fork And Western Railroad to an existing iron pipe; thence South 23°58' East, 418.36 feet to the beginning. Containing 6.53 acres.

Deed book No. 128, Page 547, R.O.W.C.T.

Surveyed by Earl W. Smith, R.L.S., TENN. NO. 466
P. O. Box 423, McMinnville, Tenn. 37110 473-5878

To Be Transferred
DEC 9 1992
Carolyn Miller
Property Assessor

Re-Recorded

STATE OF TENNESSEE, WARREN COUNTY
The foregoing instrument and certificate were noted
Note Book 17 Page 290 At 12:35 o'clock P M 12-9 1992
and recorded In WD Book 272 Series ____ Page 379
State Tax Paid $ — Fee — Recording Fee 12.00 Total $12.00
Witness My Hand.
Receipt No 42496
Register

This Instrument Prepared By:
STANLEY & BRATCHER, ATTORNEYS
101 West Main Street
McMinnville, TN 37110

Map No. 158 P G
Parcel No. 9

WARRANTY DEED

FOR AND IN CONSIDERATION of the sum of $10.00, cash in hand paid, receipt of which is acknowledged, and other good and valuable considerations, we, CHARLES EARL MAYBERY and wife, JOYCE ROSE MAYBERY, hereinafter called Grantor(s), hereby convey(s) the following described land to BILLY A. HARPER and JOHN M. PARKER, as tenants in common, hereinafter called Grantee(s). Grantor(s) covenant(s) with Grantee(s) that Grantor(s) are seized and possessed of said land, have a right to convey it, warrants the title against all persons, and it is unencumbered unless otherwise stated herein. Said land is in the Fir Civil District of Warren County, Tennessee, and described as follows:

> Beginning on a stake in the North margin of Sparta Street, the same being a corner of Cumberland Lumber and Manufacturing Co., Inc. lot, formerly the A. P. Rich lot, said stake being 8.4 feet in a northwardly direction from the center of a culvert of State Highway No. 1 (U.S. Highway 70 South), said line of 8.4 feet from the center of the culbert runs parallel with the wing of the culvert, said culvert being constructed of concrete, and running thence from the beginning corner North 65 deg. 30 min. East, 441.44 feet with the North margin of Sparta Street to an existing iron pipe; thence North 18 deg. 04 min. West, 289.11 feet to an existing iron pin; thence North 60 deg. 44 min. East, 207.49 feet to an iron stake, a corner of Town of McMinnville lot; thence North 49 deg. 45 min. West, 379.69 feet with the Town of McMinnville lot to an iron stake in the South right of way of Caney Fork and Western Railroad; thence South 41 deg. 11 min. West, 558.15 feet with the South right of way of Caney Fork and Western Railroad to an existing iron pipe; thence South 23 deg. 08 min. East, 418.36 feet to the beginning. Containing 6.53 acres, more or less, as per the survey of Earl W. Smith, R.L.S. No. 466, P.O. Box 423, McMinnville, Tennessee, dated 10/31/92.
>
> For source of title, see Deed Book 272, Page 379, Register's Office, Warren County, Tennessee.

This the 10th day of May, 1994.

Charles Earl Maybery
CHARLES EARL MAYBERY

Joyce Rose Maybery
JOYCE ROSE MAYBERY

STATE OF TENNESSEE

COUNTY OF WARREN

Personally appeared before me, the undersigned authority, the above named CHARLES EARL MAYBERY and wife, JOYCE ROSE MAYBERY, with

whom I am personally acquainted, and who acknowledged that they executed this warranty deed for the purposes therein contained.

WITNESS my hand and official seal of office at McMinnville, Tennessee, this the 10th day of May, 1994.

NOTARY PUBLIC

My Comm. Exp.: 10-8-94

The consideration for this transfer, or the value of the interest in property transferred, whichever is greater is $ 175,000.00.

Doug W. Roberts

Sworn to and subscribed before me this the 11 day of May, 1994.

REGISTER/~~NOTARY PUBLIC~~

My Comm. Exp.:

To Be Transferred
MAY 11 1994
Property Assessor

Person or Entity Responsible for Payment of Taxes:

Billy A. Harper
P.O. Box 54
McMinnville, TN 37110

PROPERTY OWNER NAME John M Parker

Address of Property Owner(s): STREET P.O Box 850
CITY Tullahoma STATE TN ZIP 37388

STATE OF TENNESSEE

COUNTY OF WARREN

The foregoing instrument and certificate were noted in Note Book 19, Page 179, at 3:45 o'clock P.M. on the 11th day of May, 1994, and recorded in Deed Book 279, Page ____.

State Tax Paid $ 647.50
Recording Fee $ 8.00
Fee $ 1.00
Total $ 656.50
Receipt No. 53978

REGISTER

NOTICE: FAILURE TO PROPERLY RECORD THIS INSTRUMENT IN THE REGISTER OF DEEDS OFFICE COULD SERIOUSLY JEOPARDIZE YOUR RIGHTS. THE PREPARER OF THIS DEED MAKES NO REPRESENTATION AS TO THE STATUS OF THE TITLE OF THE PROPERTY DESCRIBED HEREIN OR AS TO THE ACCURACY OF THE DESCRIPTION.

REFERENCE 23

XI *** COMMERCIAL ***

STATE OF TENNESSEE REAL ESTATE APPRAISAL CARD

PROPERTY ADDRESS	RED RD 202
OWNERS NAME AND MAILING ADDRESS	CUMBERLAND LUMBER CO 2C2 RED RD MCMINNVILLE TN 37110
SUBDV 1	BK PG BL LT
SUBDV 2	BK PG BL LT
ADDITIONAL DESCRIPTION	
DIMENSIONS	

TAX YEAR	DIST	MAP	GROUP	CONTROL MAP	PARCEL	PI	SI
1992	01	058P	G	058P	010.00		000

COUNTY OF WARREN
452 MCMINNVILLE

DATE UPDATED	03/05/92
DATE PRINTED	03/06/92
CARDS IN PARCEL	1 OF 2

TOTAL LAND UNITS

DEED	.00
CALC	2.7

APPRAISED VALUE RECAP

BASE-60*33*31*63*14*
32*15*64
A-SSA-63*31
B-CFA-15*32
C-CPU-14*60*
S12
USB-60*96*60*96

FOUNDATION	SPREAD FOOTING	
FLOOR SYSTEM	SLAB ON GRADE	HF 1.00
EXT WALL	CONCRETE BLOCK	PWF 1.00
STRUCT FRAME	WOOD BEAM & COL	
ROOF FRAMING	WOOD FRAME / TRUSS	
ROOF COV-DEC	BUILT-UP / WOOD	
CAB-MILLWORK	AVERAGE	
FLOOR FINISH	CONCRETE FINISH	RMS 1
INTER FINISH	NONE	PF 1.00
PAINT-DECOR	AVERAGE	
HTG/AIR COND	NONE	
PLUMBING	NO. OF FIXTURES 2	
BATH TILE	NONE	
ELECTRICAL	AVERAGE	BMF
QUALITY	AVERAGE	01.00000

TOTAL UNITS	SHAPE FACTORS	SIZE FACTORS	ADJ'D UNITS	BASE RATE	ADJ'D BASE RATE	IMPR TYPE	ACTUAL YEAR BUILT	EFFECTIVE YEAR BUILT
105	100	111	117	13.00	15.21	40	1930	1930

AREA DESC	% OF RATE	ADJ'D SQUARE FOOT RATE	AREA RATE	SQUARE FEET	REPL COST NEW
BASE	100	15.21	15.21	3327	50604
CPU	30	15.21	4.56	840	3830
CFA	200	15.21	30.42	480	14602
SSA	160	15.21	24.34	1953	47536
USB	100	15.21	15.21	5760	87610

TOTAL AREAS → AUX - 840 BASE - 11520

AGE	DEPRECIATION NORM	DEPRECIATION OTHER	FUNC	ECON	% COND.	REPL COST NEW	DEPR REPL COST
62	60	0	17	10	13	204182	26544

NO OF STORIES 2

	EX FEAT/SPEC BLDG DESCRIPTION		SIZE	UNIT PRICE	UNITS	EFF YR BUILT	ANNUAL DEPREC RATE	PERCENT COND	DEPREC VALUE
1									
2									
3									
4									
5									
6									
7									
8									

EX FEAT. SPEC BLDG APPR DATE — APPR BY — TOTAL CALCULATED EX FEAT./SPEC BLDG VALUE

GENERAL PARCEL DATA

LAND APPRAISAL	BY	SSD	WARD	EDD	PLAN	OTHER	AREA CODE
09/11/80	02		00	04			M10

PARC STAT	EXIST FRNT	TOPO	TYPE OWNER	ROAD NO	ROAD TYPE	CONST CODE	SUBDV TRACT	COORDINATES
2	0	0	0		2			

CENSUS TRACT — BLOCK — AREA — OPTIONAL

GENERAL CARD DATA

BLDG APPRAISAL	BY	SOURCE	NO DWELL UNITS		ZONING	OCC	COND
09/11/80	02	OW	1 1 1 0			0	1

PERMIT NO. — FHA NUMBER — RENTAL SOURCE — RENTAL AMOUNT — RENTAL SCHEDULE

	LAND DESCRIPTION	DESC CODE	SIZE - DIMENSION	SOIL CLASS	UM	FLD	LOC	SIZ	DEPTH FACTOR	COND FACTOR	UNIT LAND PRICE	ADJ D UNIT LAND PRICE	LAND UNITS	MARKET LAND VALUE	USE COND FACTOR	LAND USE UNIT PRICE	USE LAND VALUE
1	COMMERCIAL	10	0350X0300			100	100	100	108	100	200.00	216.00	374.00	80784			
2																	
3																	
4																	
5																	
6																	

LAND USE CODES 1 24 2 3 4 — LAND TOTAL — THIS CARD 374.00 80784 THIS CARD

DEED TRANSFER	BOOK	PAGE	NOTES
020851	107	307	SUPREME BLDG CO MAIN BLDG RENTS FOR 250 MONTHLY
091350	107	312	BLDG 1 FOR 150

Attach to Memo 3/24/94
Warren Co. General File

COMMERCIAL ***

STATE OF TENNESSEE REAL ESTATE APPRAISAL CARD

202 202

PROPERTY ADDRESS

OWNERS NAME AND MAILING ADDRESS

CUMBERLAND LUMBER CO

202 RED RD
MCMINNVILLE TN 37110

SUBDIV 1: BK PG BL LT

SUBDIV 2: BK PG BL LT

ADDITIONAL DESCRIPTION

DIMENSIONS

TAX YEAR 1992 | DIST 01 | MAP 058P | GROUP G | CONTROL MAP 058P | PARCEL 010.00 | PI | SI 000

COUNTY OF WARREN
452 MCMINNVILLE

DATE UPDATED C3/05/92
DATE PRINTED C3/06/92
CARDS IN PARCEL 2 OF 2

TOTAL LAND UNITS 374.00

LEED .00
CALC 2.7

APPRAISED VALUE RECAP

IMP	57800
LAND	80800
TOTAL APPR	138600
TOT W/USE	0
ASSESSMENT	55440
PRCP TYPE 08	40%

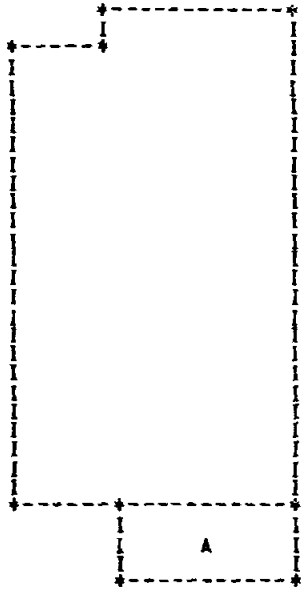
BASE-40*4*20*93*22*38*97
A-CPU-16*38*
ST2
USE-40*4*20*93*60*97

FOUNDATION	SPREAD FOOTING
FLOOR SYSTEM	SLAB ON GRADE HF 1.00
EXT WALL	CONCRETE BLOCK PWF 1.00
STRUCT FRAME	WOOD BEAM & COL
ROOF FRAMING	WOOD FRAME / TRUSS
ROOF COV-DEC	BUILT-UP / WOOD
CAB-MILLWORK	BELOW AVERAGE
FLOOR FINISH	CONCRETE FINISH RMS 1
INTER FINISH	NONE PF 1.00
PAINT-DECOR	BELOW AVERAGE
HTG/AIR COND	NONE
PLUMBING	NO. OF FIXTURES 0
BATH TILE	NONE
ELECTRICAL	BELOW AVERAGE BRF
QUALITY	AVERAGE 01.00000

TOTAL UNITS	SHAPE	SIZE	ADJ'D UNITS	BASE RATE	ADJ'D BASE RATE	WARR TYPE	ACTUAL	EFFECTIVE
100	100	102	103	13.00	13.39	40	1930	1920
FACTORS							YEAR BUILT	

AREA DESC	% OF RATE	ADJ'D SQUARE FOOT RATE	AREA RATE	SQUARE FEET	REPL COST NEW
BASE	100	13.39	13.39	5740	76859
CPU	30	13.39	4.02	608	2444
USB	100	13.39	13.39	5740	76859

TOTAL AREAS → AUX - 608 BASE - 11480



DEPRECIATION

AGE	NORM	OTHER	FUNC	ECON	% COND	REPL COST NEW	DEPR REPL COST
62	60	0	20	C	20	156162	31232

NO OF STORIES 2

EX FEAT/SPEC BLDG DESCRIPTION	%	SIZE	UNIT PRICE	UNITS	EFF YR BUILT	ANNUAL DEPREC RATE	PERCENT COND	DEPREC VALUE

EX FEAT/SPEC BLDG APPR DATE | APPR BY | TOTAL CALCULATED EX FEAT/SPEC BLDG VALUE

LAND DESCRIPTION	DESC CODE	SIZE - DIMENSION	SOIL CLASS	UM	FLD	LOC	SIZ	DEPTH FACTOR	COND FACTOR	UNIT LAND PRICE	ADJ'D UNIT LAND PRICE	LAND UNITS	MARKET LAND VALUE	USE COND FACTOR	LAND USE UNIT PRICE	USE LAND VALUE

LAND USE CODES 1 24 2 3 4 LAND TOTAL THIS CARD THIS CARD

DATE	PRICE	INSTRUMENT	BOOK	PAGE	DEED TRANSFER

NOTES

GENERAL PARCEL DATA

LAND APPRAISAL	BY	S.S.D.	WARD	E.D.D.	PLAN	OTHER	WORK CODE	WORK CODE	WORK CODE	AREA CODE

PARC STAT | DIST TREND | TOPO | TYPE OWNER | ROAD NO | ROAD TYPE | CONST CODE | SUBDV TRACT | COORDINATES

CENSUS TRACT | BLOCK | BLK FACE | AREA | CONS DIST | OPTIONAL | N-S | E-W

GENERAL CARD DATA

BLDG APPRAISAL	BY	SOURCE	NO DWELL UNITS	NOTES				ZONING	OCC	COND
C9/11/80	02	CM		1	3	1	C		0	1

PERMIT NO | FHA NUMBER | RENTAL SOURCE | RENTAL AMOUNT | RENTAL SCHEDULE

OWNER 150 MONTHLY

REFERENCE 24

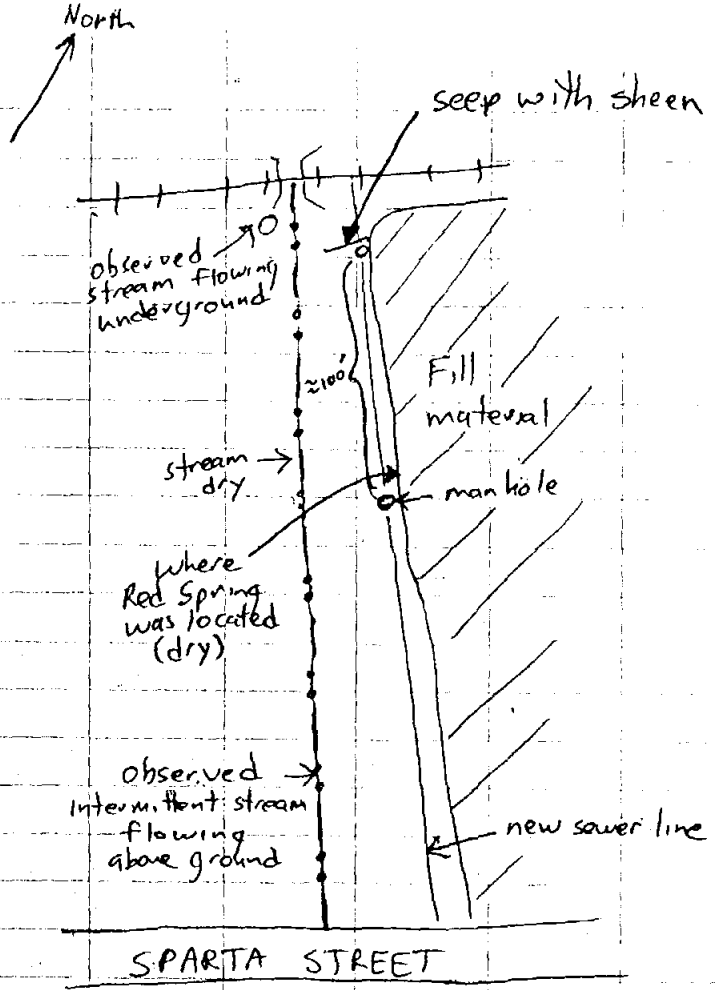
Date: 4/24/95
Facility: Cumberland Lumber Co.
Site: 89-506
Type facility: Unused lot with contaminated spring.
County: Warren
City: McMinnville
State: TN
Purpose of visit: Observe Red Spring running and obtain property ownership information.
State Personnel: John Kizer
Other People contacted:
Secretary at Register of Deeds office

Photos: No
Samples: No
Weather: Cloudy, misting rain, 50's
Vehicle: 51-HW59
Milage: 181

 John Kizer 4/24/95

1010	Arrived at site. The intermittent stream was dry and Red Spring was not flowing. Due to the ~~have~~ heavy amounts of rain during the past week, both were expected to be running. Further inspection revealed that the intermittent stream was flowing underground in this area and emerging above ground further down stream toward sparta st. Upstream next to the railroad tracks is a seven foot deep manmade hole where the stream could be seen flowing. This may be part of the old sewer. No contamination was noticed in the intermittent stream. Next to the railroad where the edge of the fill material and the new sewer line meets was a small seep that had a sheen. No odor was present. See sketch on next page.

 John Kizer 4/24/95



1030 Walked railroad track up to Carter Oil Co. Inc. to ~~see~~ look for any potential problems. None were noticed. ~~The railroad track appears to no longer be in use.~~ 4/24/95

John Kyin 4/24/95

1100 Went to Register of Deeds office and Assessor of Properties office to determine the owner of the 6.53 acre lot were Formfit Rogers used to be. The owner is Billy A. Harper. The secretary at the Register of Deeds office stated that Formfit Rogers ~~has~~ 4/24/95 went out of business about two weeks ago.

1130. Went back by site. In front of the now empty Formfit Rogers building is a sign that states "Warehouse Space Available, For sale/rent/lease." The intermittent stream flows through the backyards of 13 homes, downstream from the site.

4/24/95 Summary

~~Perm~~ 4/24/95 Performed on and off-site reconnaissance. Obtained records of property ownership.

John Kyin 4/24/95

REFERENCE 25

DSF file

89-506

CERCLA

NEW SITE DISCOVERY INFORMATION

Name of Person Completing SD Report: Tim Stewart

Date: May 17, 1994

Site Name: Cumberland Lumber Co.

County: Warren

Site Address: 202 Red Road

City: McMinnville

Zip Code: 37110

Latitude: 35 / 41 / 15 / N

Size of site: 350' x 300'

Longitude: 85 / 45 / 45 / W

Quadrangle: Mcminnville

General Description of Site: Old abandoned buildings, 9 visible drums - some bulging some unsealed, old foundations of two additional buildings, Red Spring behind buildings (see photos) presently used for storage.

Site Status: _____Active __X__Inactive **RCRA Facility?** _____yes __X__no

Years of Operation 1962 to current

Waste believed present and quantities: Toluene, TCE, Benzene, 1, 1-DCA, 1,1-DCE, Xylene, Ethyle Benzene (see sample results)

Brief description of potential hazard: Spring has strong odor and flows through a residential area into Barren Fork River

REFERENCE 26

BKA 3/2.

COPY: C.C

Warren Co. Gen. file

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

OFFICE CORRESPONDENCE

DATE: 3/24/94 TIME: 8:15 am

TO: DSF Files SUBJECT: Drum Removal - Warren Co.

FROM: Tim Stewart

RE:

I called Ray Spivey Jr. of Cumberland Lumber Company in McMinnville to notify him of the drums on the property at Red Road and Sparta Rt. Cumberland Lumber Co owns the property. He stated that while they own it, the county Emergency Management Agency has been using the site. He would look into and correct the drum problem.

Tim Stewart

3/24/94

REFERENCE 27

BKA 6/30
File: Warren Co. General
Copy: C.O.

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

OFFICE CORRESPONDENCE

DATE: 6/30/94 TIME: 2:02

TO: DSF Files SUBJECT: Drum Removal

FROM: Tim Stewart

RE: Cumberland Lumber

John Jackson → Cumberland Lumber (615) 473-9542
Empty roofing tar drums at abandoned buildings will be picked up soon when the disposal truck makes its rounds. A copy of the manifest will be mailed to me once removed.

Tim Stewart
6/30/94

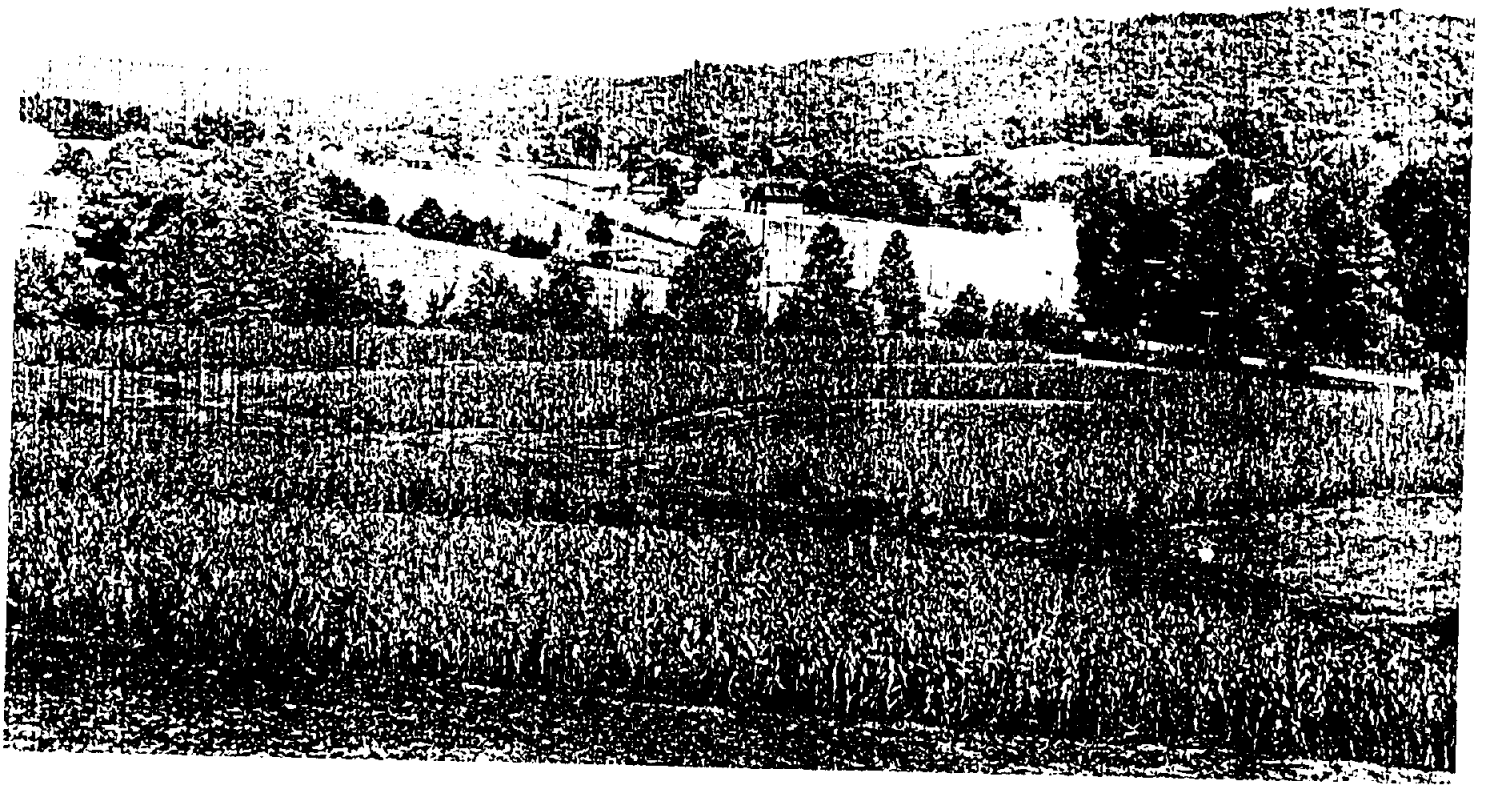
REFERENCE 28

REFERENCE 29

Issued Sept. 1967

SOIL SURVEY

Warren County, Tennessee



UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
In cooperation with
TENNESSEE AGRICULTURAL EXPERIMENT STATION

INESSEE — SHEET NUMBER 26

(Joins sheet 27)

cale 1:15 840

0

5000 Feet

compactive effort, each time at a successively higher moisture content. The density (unit weight) of the soil material increases as the moisture content increases until the optimum moisture content is reached. After that, the density decreases as the moisture content increases. The highest density obtained in the compaction test is termed "maximum density." Data on moisture and density are important in earthwork because, as a rule, the soil will be most stable if it is compacted to the maximum density when it is at the optimum moisture content.

The results of the mechanical analyses show the relative proportions of the particles of different sizes. The liquid limit and the plasticity index indicate the effect of water on the consistence of the soil material. As the moisture content of a clayey soil increases from a very dry stat the material changes from a semisolid to a plastic stat As the moisture content is further increased, the materi changes from a plastic to a liquid state. The plastic lin is the moisture content at which the material passes fro a semisolid to a plastic. The liquid limit is the moistu content at which the material passes from a plastic to liquid. The plasticity index is the numerical difference l tween the liquid limit and the plastic limit. It indicat the range of moisture content within which a soil materi is in a plastic condition.

Table 4 gives two engineering classifications for ea soil sample. These classifications are based on the liqu limit, the plasticity index, and the data obtained by n

TABLE 5.—*Brief description of soils and th*

[Dashes indicate information is not availa

Map symbol	Soil	Description of soil and site	Depth from surface	Classification
				USDA texture
			Inches	
AnB	Allen loam, 2 to 5 percent slopes.	Well-drained soils formed in local alluvium on foot slopes and benches; limestone bedrock at depth of 5 to 25 feet.	0–10	Loam
AnC	Allen loam, 5 to 12 percent slopes.		10–40	Clay loam
AnD	Allen loam, 12 to 20 percent slopes.		40–60	Clay loam or clay
AnE	Allen loam, 20 to 30 percent slopes.			
AaD3	Allen clay loam, 12 to 20 percent slopes, severely eroded.	Well-drained soils formed in local alluvium on foot slopes and benches; upper 4 to 6 inches of soil washed away; limestone rock at depth of 5 to 25 feet.	0–40	Clay loam
			40–60	Clay loam or clay
AcD	Allen cobbly loam, 5 to 20 percent slopes.	Well-drained soils formed in local alluvium on foot slopes and benches; cobbles 3 to 10 inches across on surface and in profile; limestone bedrock at depth of 5 to 25 feet.	0–14	Cobbly loam
AcE	Allen cobbly loam, 20 to 30 percent slopes.		14–60	Cobbly clay loam
BaC	Baxter cherty silt loam, 5 to 12 percent slopes.	Well-drained cherty soils on rolling to steep uplands; formed from cherty limestone; depth to limestone rock is 5 to 30 feet.	0–8	Cherty silt loam
BaD	Baxter cherty silt loam, 12 to 20 percent slopes.		8–20	Cherty silty clay loam.
BaE	Baxter cherty silt loam, 20 to 30 percent slopes.			
BaF	Baxter cherty silt loam, 30 to 50 percent slopes.		20–72	Cherty clay
BcC3	Baxter cherty silty clay loam, 5 to 12 percent slopes, severely eroded.	Well-drained cherty soils on rolling to hilly uplands; formed from cherty limestone; upper 4 to 6 inches of soil washed away; depth to limestone rock is 5 to 30 feet.	0–18	Cherty silty clay loam.
BcD3	Baxter cherty silty clay loam, 12 to 20 percent slopes, severely eroded.		18–72	Cherty clay
BcE3	Baxter cherty silty clay loam, 20 to 30 percent slopes, severely eroded.			
BoE	Bodine cherty silt loam, 20 to 45 percent slopes.	Very cherty soils on steep hillsides; formed from cherty limestone; depth to bedrock is 2 to 10 feet.	0–8	Cherty silt loam
			8–60	Cherty silt loam
Br	Bruno loamy sand.	Very sandy soil on first bottoms; flooded nearly every winter.	0–60	Loamy sand
CaB	Captina silt loam, 1 to 3 percent slopes.	Moderately well drained soil with a fragipan; on low terraces and foot slopes; 2 to 3 feet to seasonally high water table [2]; limestone bedrock at depth of 5 to 30 feet.	0–10	Silt loam
			10–24	Silt loam
			24–40	Silt loam
			40–60	Silty clay loam
ChB2	Christian silt loam, 2 to 5 percent slopes, eroded.	Well-drained soils on rolling and hilly uplands; formed from siltstone and limestone; depth to rock is 3 to 10 feet.	0–8	Silt loam
ChC	Christian silt loam, 5 to 12 percent slopes.		8–60	Silty clay

See footnotes at end of table.

TABLE 5.—*Brief description of soils and their estima*

Map symbol	Soil	Description of soil and site	Depth from surface	Classification — USDA texture
	Continued—			
ChC2	Christian silt loam, 5 to 12 percent slopes, eroded.			
ChD	Christian silt loam, 12 to 20 percent slopes.			
ChD2	Christian silt loam, 12 to 20 percent slopes, eroded.			
			Inches	
CnC3	Christian silty clay loam, 5 to 12 percent slopes, severely eroded.	Well-drained soils on rolling and hilly uplands; formed from siltstone and limestone; upper 4 to 6 inches of soil washed away; depth to rock is 3 to 8 feet.	0–6	Silty clay loam
CnD3	Christian silty clay loam, 12 to 20 percent slopes, severely eroded.		6–50	Silty clay
Co	Cobbly alluvial land.	Cobbly land on first bottoms; flooded nearly every winter; bedrock at depth of 4 to 15 feet.	0–30	Very cobbly sand loam.
CsA	Cumberland silt loam, 0 to 2 percent slopes.	Well-drained soils on high terraces; formed in old alluvium; depth to bedrock is 6 to 30 feet.	0–10	Silt loam
CsB	Cumberland silt loam, 2 to 5 percent slopes.		10–24	Clay or clay loam
CsC2	Cumberland silt loam, 5 to 12 percent slopes, eroded.		24–85	Clay
CuC3	Cumberland silty clay loam, 5 to 12 percent slopes, severely eroded.	Well-drained soils on high terraces; formed in old alluvium; upper 4 to 6 inches of soil washed away; depth to bedrock is 6 to 30 feet.	0–30	Clay or silty clay loam.
CuD3	Cumberland silty clay loam, 12 to 20 percent slopes, severely eroded.		30–85	Clay
DkB	Dickson silt loam, 1 to 4 percent slopes.	Moderately well drained soil with a fragipan; on uplands and foot slopes; 2 to 3 feet to seasonally high water table; depth to limestone rock is 6 to 30 feet.	0–10	Silt loam
			10–24	Silt loam
			24–38	Silt loam
			38–50	Silty clay loam.
Du	Dunning silty clay loam.	Very poorly drained black soils on first bottoms; flooded nearly every winter.	0–10	Silty clay loam
			10–60	Silty clay or clay
Ek	Elkins silt loam.	Very poorly drained black soil in upland depressions.	0–30	Silt loam
EtC	Etowah cherty silt loam, 5 to 12 percent slopes.	Well-drained cherty soils on foot slopes and terraces; chert is mostly less than 3 inches across; bedrock at depth of 5 to 15 feet.	0–16	Cherty silt loam
EtD	Etowah cherty silt loam, 12 to 20 percent slopes.		16–42	Cherty silty clay loam.
EtE	Etowah cherty silt loam, 20 to 30 percent slopes.			
EwB	Etowah silt loam, 2 to 5 percent slopes.	Well-drained soils on foot slopes and terraces; bedrock at depth of 5 to 30 feet.	0–14	Silt loam
EwC	Etowah silt loam, 5 to 12 percent slopes.		14–50	Silty clay loam
EwD	Etowah silt loam, 12 to 20 percent slopes.			
Gd	Gullied land.	Land consisting of a network of shallow and deep gullies; soil material between the gullies formed from limestone and is fine textured; bedrock at depth of 0 to 30 feet.	(2)	Clay or cherty c
Gu	Guthrie silt loam.	Poorly drained soil on upland flats; formed in 2 to 3 feet of loess over limestone; bedrock at depth of 10 to 30 feet; seasonally high water table at depth of less than 1 foot.	0–35	Silt loam
			35–50	Silty clay loam
			50–72	Silty clay
HaB	Hartsells loam, 2 to 5 percent slopes.	Well-drained soils on Cumberland Plateau uplands; formed from sandstone; bedrock at depth of 2 to 6 feet.	0–10	Loam
HaC	Hartsells loam, 5 to 12 percent slopes.		10–36	Clay loam or l
Hc	Huntington cherty silt loam.	Well-drained cherty soil on first bottoms; formed from cherty limestone; flooded for a few days in winter; bedrock at depth of 5 to 25 feet.	0–40	Cherty silt loam

See footnotes at end of table.

TABLE 5.—*Brief description of soils and their estima*

Map symbol	Soil	Description of soil and site	Depth from surface	Classification
				USDA texture
			Inches	
Hu	Huntington silt loam.	Well-drained loamy soil on first bottoms; flooded for a few days in winter.	0-40	Silt loam
JeB	Jefferson loam, 2 to 5 percent slopes.	Well-drained soils formed in old alluvium derived from sandstone and shale; bedrock at depth of 8 to 25 feet.	0-10	Loam
JeC	Jefferson loam, 5 to 12 percent slopes.		10-30	Loam or clay loa
JeD	Jefferson loam, 12 to 20 percent slopes.		30-50	Loam or clay loa
JeD3	Jefferson loam, 12 to 20 percent slopes, severely eroded.			
JsD	Jefferson cobbly sandy loam, 5 to 20 percent slopes.	Well-drained cobbly soils formed in local alluvium on foot slopes and benches; cobbles 3 to 10 inches across on surface and in profile; bedrock at depth of 3 to 25 feet.	0-10	Cobbly sandy loa
			10-50	Cobbly sandy cl loam.
La	Lawrence silt loam.	Somewhat poorly drained soil with a fragipan; depth to bedrock is 15 to 30 feet; seasonally high water table at a depth of less than 1 foot.	0-8	Silt loam
			8-24	Silt loam
			24-45	Silt loam
			45-60	Silty clay loam
Lo	Lindside silt loam.	Moderately well drained or somewhat poorly drained loamy soil on first bottoms; flooded for a few days nearly every winter.	0-10	Silt loam
			10-40	Silt loam
LrB	Linker loam, 2 to 5 percent slopes.	Well-drained soils on uplands of the Cumberland Plateau; formed from acid sandstone; bedrock at depth of 2.5 to 8 feet.	0-10	Loam
LrC	Linker loam, 5 to 12 percent slopes.		10-40	Clay loam
			40-50	Sandy Clay loam
Me	Melvin silt loam.	Poorly drained silty soil on first bottoms; flooded for a few days nearly every winter.	0-10	Silt loam
			10-30	Silt loam
MnB	Minvale silt loam, 2 to 5 percent slopes.	Well-drained soils on foot slopes in the Highland Rim; formed in old alluvium from limestone soils; bedrock is at depth of 5 to 30 feet.	0-12	Silt loam
MnC	Minvale silt loam, 5 to 12 percent slopes.		12-50	Silty clay loam.
MoB	Mountview silt loam, 2 to 5 percent slopes.	Well-drained soils on uplands of the Highland Rim; formed in 2 to 3 feet of loess over residuum from limestone; bedrock at depth of 8 to 30 feet.	0-10	Silt loam
MoC	Mountview silt loam, 5 to 12 percent slopes.		10-36	Silt loam
MoC3	Mountview silt loam, 5 to 12 percent slopes, severely eroded.		36-60	Cherty clay or cl
RaC	Ramsey loam, 5 to 12 percent slopes.	Well-drained to excessively drained soils on sloping to steep uplands of the Cumberland Plateau; acid sandstone bedrock at depth of 10 to 24 inches.	0-7	Loam
RaD	Ramsey loam, 12 to 20 percent slopes.		7-24	Loam or sandy l
RaE	Ramsey loam, 20 to 30 percent slopes.			
RcD	Ramsey very rocky sandy loam, 10 to 20 percent slopes.	Excessively drained, very rocky, moderately steep soils on the Cumberland Plateau; between 15 and 50 percent of surface covered by sandstone; bedrock at depth of 0 to 2 feet.	0-6	Sandy loam
			6-24	Sandy loam
RfE	Ramsey-Jefferson stony complex, 20 to 45 percent slopes.	See the descriptions and estimates given for the Ramsey soils and the Jefferson soils.		
Ro	Rock land.	More than 50 percent of surface covered by limestone.		
Sa	Sango silt loam.	Moderately well drained soil with a fragipan; formed from 2 to 3 feet of loess over residuum from limestone; depth to bedrock is 15 to 30 feet; seasonally high water table at a depth of 1½ feet.	0-8	Silt loam
			8-24	Silt loam
			24-40	Silt loam
			40-60	Silty clay or clay

See footnotes at end of table.

REFERENCE 30

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

OFFICE CORRESPONDENCE

DATE: April 26, 1995

TO: Brenda Apple, Mgr. NFO

FROM: John T. Weakley

SUBJECT: Threatened and Endangered Species for Cumberland Lumber Company, 89-506

Enclosed is the T & E report for Cumberland Lumber Co.

JTW 4/26/95

e 2.

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

April 24, 1995

MEMORANDUM

To: Mr. Frank Grubbs, Deputy Director
Division of Superfund, TDEC

From: Andrew N. Barrass, Ph. D.,
Environmental Review Coordinator
Division of Ecological Services, TDEC

Subject: Project review information for endangered species and critical or sensitive habitat

Please be advised that a review of our Division's Biological Conservation Data System, BCD, indicates recorded threatened and/or endangered species within a four mile radius of the proposed project sites. The review is for the proposed **Cumberland Lumber Company site, near McMinnville, Warren County TN** project site(s). The information is listed by quad map and is attached.

The results of our review do not mean that a comprehensive biological survey has been completed. We would suggest that a survey of the project sites be conducted subsequent to project implementation. Please notify our office of your findings.

Please be advised, however, that this information is sensitive to the protection of rare habitat, threatened or endangered species, and natural areas which our Department has the responsibility to protect. Therefore, we would request that this information **only** be used as a research tool by your professional staff and not be made available to the public or anyone outside of your Division.

Additionally, our review of the existing data bases indicates recorded threatened or endangered species occurrences adjacent to the PPE of the project site. We would request that you consult with our staff scientists concerning these species and methods of avoiding impact to these populations. These species have very specific or rare habitat. Please see the attached habitat listing for further information.

Please find attached the listings of the various data occurrences or elements from our Biological Conservation Data System, BCD, that have been retrieved from our computer data bases. The information provided is current for this quarter of the calendar year. Our information is continuously being updated and future searches may result in expanded data listings for this specific project investigation.

Definitions of BCD Data Elements:

COUNTYNAME = Tennessee County Name

MANAME = Managed Area Name

QUADNAME = Quad Map Name

SCOMNAME = State Listed, Species Common Name

SITENAME = Site Name for Natural Area, Critical or Sensitive Habitat

SNAME = Species Name

Attachments: (6)

Federal Status Definitions of Tennessee's Rare Plants and Animals

Federally listed species are protected by the Endangered Species Act of 1973 (ESA), which is administered by the U.S. Fish and Wildlife Service (USFWS).

E/SA - Endangered by similarity of appearance to a listed species.

LE - **Listed Endangered**, the taxon is threatened by extinction throughout all or a significant portion of its range.

LT - **Listed Threatened**, a taxon likely to become endangered in the foreseeable future.

PE - **Proposed Endangered**, the taxon is proposed for listing as endangered.

PT - **Proposed Threatened**, the taxon is proposed for listing as threatened.

S - **Synonyms**

C1 - **Candidate, Category 1.** Enough available information exists to propose the taxon for listing, but listing is "precluded by other pending proposals of higher priority." Included are those taxa whose status in recent past is known, but may have already become extinct. Such possibly extinct taxa are indicated by an asterisk (*). Double asterisks (**) indicate taxa believed to be extinct in the wild, but known to be extant in cultivation or propagation.

C2 - **Candidate, Category 2.** There is enough information available to list the taxon as endangered or threatened, but substantial information regarding biological vulnerability and threat(s) are not currently known or on file to support a proposed rule.

C3 - **Candidate, Category 3.** Taxa are no longer being considered for listing as threatened or endangered species. The following subcategories are used to further indicate the reason(s) for removal from consideration:

3A - Taxa for which the U.S. Fish and Wildlife Service has persuasive evidence of extinction or of being destroyed. If recovered such taxa might acquire high priority for listing.

3B - Names that on the basis of current taxonomic understanding do not represent taxa meeting the ESA definition of "species." Such proposed taxa could be reevaluated in the future on the basis of subsequent research.

3C - Taxa which have proven to be more abundant or widespread than was previously believed and/or those that are not subject to any identifiable threat.

__NL - status varies for different populations or parts of range with at least one part not listed.

__XN - non-essential experimental population.

__XE - essential experimental population.

(Taken from Federal Register, 50(188), September 18, 1985, pp. 37958-37959, and September 27, 1985, pp. 39526-39527.)

Note: The taxa listed as Categories 1 and 2 may be considered as candidates for addition to the list of Endangered and Threatened species, and, as such, consideration should be given to them in environmental planning. Taxa listed as LE, LT, PE and PT must be given consideration in environmental planning involving federal funds, lands, or permits, and should be given consideration in all non-federal activities.

For further information contact USFWS at (615) 528-6481, Tennessee Wildlife Resources Agency (TWRA) at (615) 781-6670 or the Division of Natural Heritage (DNH) at (615) 532-0431. USFWS has prime responsibility for federal status assignment and enforcement and protection of federally listed species. TWRA has responsibility for state status and enforcement and protection of state listed species.

State Status Definitions of Tennessee's Rare Plants

State Status indicates which plants are formally listed as state **Endangered, Threatened,** or **Special Concern** under the authority of the **Tennessee Department of Environment and Conservation** (T.C.A. 70-8-301 to 314, and Rules of Tennessee Department of Conservation, Ch. 0400-6-2). The Department has the valuable assistance of the State's best field botanists, twelve of whom serve on the Scientific Advisory Committee which periodically reviews the list.

E - Endangered, species now in danger of becoming extinct in Tennessee because of:

(a) their rarity throughout their range, or
(b) their rarity in Tennessee as a result of habitat destruction or restricted area of distribution.

E* - *Taxa considered to be* **Endangered** *in Tennessee due to evidence of large numbers* being taken from the wild and lack of commercial success with propagation or transplantation.

T - Threatened, species likely to become endangered in the immediately foreseeable future as a result of rapid habitat destruction or commercial exploitation.

S - Special Concern, species requiring concern because of:

(a) their rarity in Tennessee because the State represents the limit or near-limit their geographic range, or
(b) their status is undetermined because of insufficient information.

P - Possibly Extirpated, species that have not been seen in Tennessee for the past 20 years.

(Adapted from Somers, Paul. 1989. Revised List of the Rare Plants of Tennessee. Journal of the Tennessee Academy of Sciences, 64(3): 179-184.)

Note: The taxa listed as E, T, or S should be given consideration in environmental planning. For further information contact the **Division of Natural Heritage** (DNH) at (615) 532-0431. DNH has prime responsibility for state status assignment and enforcement and protection of state listed plants.

State Status Definitions of Tennessee's Rare Wildlife

State Status indicates which animals are formally listed as state endangered or threatened under the authority of th **Tennessee Wildlife Resources Agency** (T.C.A. 70-8-104, 70-8-105, and 70-8-107).

E - Endangered- any species or subspecies of wildlife whose prospects of survival or recruitment within the state are in jeopardy or are likely within the foreseeable future to become so due to any of the following factors:

(a) The destruction, drastic modification, or severe curtailment of its habitat;
(b) Its overutilization for scientific, commercial or sporting purposes;
(c) The effect on it of disease, pollution, or predation;
(d) Other natural or man-made factors affecting its prospects of survival or recruitment within th state; or
(e) Any combination of the foregoing factors.

T- Threatened- any species or subspecies of wildlife which is likely to become an endangered species within the foreseeable future.

D - Deemed in Need of Management- any species or subspecies of nongame wildlife which the executive director of the TWRA believes should be investigated in order to develop information relating to population, distribution, habitat, needs, limiting factors, and other biological and ecological data to determine management measures necessary for their continued ability to sustain themselves successfully.

LIST OF RARE AND ENDANGERED SPECIES FOR MCMINNVILLE AND CARDWELL MTN. QUADS

21 APR 1995

PIC NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS
BRATES			
S SUBGLOBOSA UMBILICATA	UMBILICATE ROCKSNAIL	3B	
A GENICULATA FULIGINOSA	GENICULATE RIVER SNAIL	C2	
A *GENICULATA PINGUIS*	*SMALL GENICULATE RIVER SNAIL*	3C	
EMA GIBBERUM	CUMBERLAND PIGTOE	LE	E
A ACUTIFLORA	SHARP-SCALED MANNAGRASS		S
ATES			
OMA LUTEOVINCTUM	*REDBAND DARTER*		D
S RUPESTRIS	BEDROCK SHINER		D

ds Processed

DESCRIPTION OF ENDANGERED OR THREATENED SPECIES DATA BASE LISTING

The following list defines species record occurrences for natural areas or special habitats for the various quad maps or data bases searched for potential project impact. The list includes *Site* name, *Species* name, and name of the of the ***Quad*** map where species record is found.

QUADNAME:.....	SCOMNAME:.....	SNAME:.....
CARDWELL MOUNTAIN	REDBAND DARTER	ETHEOSTOMA LUTEOVINCTUM
CARDWELL MOUNTAIN	CUMBERLAND PIGTOE	PLEUROBEMA GIBBERUM
CARDWELL MOUNTAIN	UMBILICATE ROCKSNAIL	LEPTOXIS SUBGLOBOSA UMBILICATA
CAR OUNTAIN	GENICULATE RIVER SNAIL	LITHASIA GENICULATA FULIGINOSA
CARDWELL MOUNTAIN	SMALL GENICULATE RIVER SNAIL	LITHASIA GENICULATA PINGUIS
CARDWELL MOUNTAIN	SHARP-SCALED MANNAGRASS	GLYCERIA ACUTIFLORA
MCMINNVILLE	BEDROCK SHINER	NOTROPIS RUPESTRIS
MCMINNVILLE	SMALL GENICULATE RIVER SNAIL	LITHASIA GENICULATA PINGUIS
MCMINNVILLE	SMALL GENICULATE RIVER SNAIL	LITHASIA GENICULATA PINGUIS

9 Records Processed

HABITAT INFORMATION FOR ENDANGERED SPECIES AND CRITICAL OR SENSITIVE HABITAT:

The following habitat description has been retrieved from a national data base for the purpose of scientific field review and population determinations. The following species are found within the Barren Fork River watershed. There is a record of the listed species adjacent to the PPE outfall, were several mussel populations are known to occur.

***Lithasia geniculata pinguis*, Small Geniculate River Snail:**

This species is similar to other small snails found within the Cumberland and Tennessee River systems. Because the habitat for the animal species listed is very specific, please request further information from our zoologist, Mr. David Withers, in our office in Nashville. He may be reached by telephone at **615/532-0431**.

We have listed similar species habitat information for comparison.

- LITHASIA ARMIGERA*According to Sickel (1988), C. ARMIGERA was found in the Cumberland River in the following habitats: In partially buried logs, on gravel, and the species was found at its highest densities on submerged rock outcrops.**
- LITHASIA DUTTONIANA*Occupies rocky substrate in riffle systems. Have found it on bedrock in flowing water below main section of riffle in Duck River.**
- LITHASIA JAYANA*Nothing specific has been published for this species. Probably occurs in the vicinity of riffles in flowing water in coarse particle substrata (i.e., cobbles, boulder, bedrock)**
- LITHASIA LIMA*Appears to inhabit rocky substrates in riffle systems (Bogan and Parmalee, 1983).**
- LITHASIA SALEBROSA*Found in the tailwater areas of dams. Sometimes found attached to logs. (Conrad, 1834)**
- LITHASIA VERRUCOSA*It inhabits rocky shoals and riffles in moderate current velocities in depths from near the water surface to several feet (approximately 3 ft).**

TENNESSEE RIVERS ASSESSMENT DATA (April 11, 1995)

Re: Division of Superfund request for Cumberland Lumber Company, Warren County Project

RIVER	N/SQ	BOATING	MANAGEMENT
BARREN FORK RIVER			
Hickory Creek to Collins River	67	48	
COLLINS RIVER			
Barren Fork River to Charles Creek	80	62	NRI

TENNESSEE RIVERS ASSESSMENT PROJECT

SCORE CODES FOR RESOURCE CATEGORIES

Natural and Scenic (N/S) Qualities (Total of 125 Points)

SCORE	POINTS	INTERPRETATION
Type I	>90 Points	Statewide or Greater Significance
Type II	>60 Points	Regional Significance
Type III	>30 Points	Local Significance
Type IV	<30 Points	More Information Needed

Recreational Boating (Total of 100 Points)

SCORE	POINTS	INTERPRETATION
Type I	>75 Points	Statewide or Greater Significance
Type II	>50 Points	Regional Significance
Type III	>25 Points	Local Significance
Type IV	<25 Points	More Information Needed

NRI, National Rivers Inventory Listing

AANAME.....	QUADNAME:.....
COLLINS STATE SCENIC RIVER	COLLINS
COLLINS STATE SCENIC RIVER	ALTAMONT
COLLINS STATE SCENIC RIVER	IRVING COLLEGE
COLL ATE SCENIC RIVER	CARDWELL MOUNTAIN

4 Records Processed

REFERENCE 31

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

OFFICE CORRESPONDENCE

DATE: 4/28/95 TIME: 0830

TO: DSF Files SUBJECT: Flood plain information

FROM: John Kizer

RE: Cumberland Lumber Co. 89-506

Phone conversation with Assessor of Properties McMinnville, TN. Cumberland Lumber Co. site was verified not to be in a flood plain by flood plain map 47-177-C-0090.

John Kizer 4/28/95

APPENDIX B

OMB Approval Number: 2050-0095
Approved for Use Through: 4/95

Site Name: Cumberland Lumber Company
CERCLIS ID No.: TND004040663
Street Address: 202 Red Road
City/State/Zip: McMinnville, TN 37110

Investigator: John Kizer
Agency/Organization: TN Division of Superfund
Street Address: 537 Brick Church Park Drive
City/State: Nashville, TN

Date: 05/01/95

DRAFT
STATE OF TN PRELIMINARY SCORE
NOT THE OPINION OF U.S. EPA

'E CHARACTERISTICS

Waste Characteristics (WC) Calculations:

1 Abandoned Drums	Drums	Ref: 2,6	WQ value	maximum
Volume	8.00E+00 drums		8.00E-01	8.00E-01

** Only First WC Page Is Printed ** | Waste Characteristics Score: WC = 18

Ground Water Pathway Criteria List
Suspected Release

Are sources poorly contained? (y/n/u)	Y
Is the source a type likely to contribute to ground water contamination (e.g., wet lagoon)? (y/n/u)	Y
Is waste quantity particularly large? (y/n/u)	N
Is precipitation heavy? (y/n/u)	Y
Is the infiltration rate high? (y/n/u)	Y
Is the site located in an area of karst terrain? (y/n)	Y
Is the subsurface highly permeable or conductive? (y/n/u)	Y
Is drinking water drawn from a shallow aquifer? (y/n/u)	N
Are suspected contaminants highly mobile in ground water? (y/n/u)	Y
Does analytical or circumstantial evidence suggest ground water contamination? (y/n/u)	Y

ther criteria? (y/n) N

SUSPECTED RELEASE? (y/n) Y

Summarize the rationale for Suspected Release:

In January 1994 the Tennessee Division of Underground Storage Tanks sampled Red Spring and found it to be contaminated with hydrocarbons and solvents. The source for contamination of Red Spring is unknown ;therefore, it could not be included under Waste Characteristics. The drums are not expected to have caused ground water contamination.

Ref: 2,4

Ground Water Pathway Criteria List
Primary Targets

Is any drinking water well nearby? (y/n/u)	N
Has any nearby drinking water well been closed? (y/n/u)	N
Has any nearby drinking water well user reported foul-testing or foul-smelling water? (y/n/u)	N
Does any nearby well have a large drawdown/high production rate? (y/n/u)	N
Is any drinking water well located between the site and other wells that are suspected to be exposed to a hazardous substance? (y/n/u)	N
Does analytical or circumstantial evidence suggest contamination at a drinking water well? (y/n/u)	N
Does any drinking water well warrant sampling? (y/n/u)	N
Other criteria? (y/n)	N
PRIMARY TARGET(S) IDENTIFIED? (y/n)	N

Summarize the rationale for Primary Targets:

No wells are expected to be contaminated.

Ref: 8,10,13

GROUND WATER PATHWAY SCORESHEETS

Pathway Characteristics		Ref.
Do you suspect a release? (y/n)	Yes	
Is the site located in karst terrain? (y/n)	Yes	10
Depth to aquifer (feet):	10	10
Distance to the nearest drinking water well (feet):	9504	8,1

LIKELIHOOD OF RELEASE	Suspected Release	No Suspected Release	References
1. SUSPECTED RELEASE	550		
2. NO SUSPECTED RELEASE		0	
LR =	550	0	

Targets

TARGETS	Suspected Release	No Suspected Release	References
3. PRIMARY TARGET POPULATION 0 person(s)	0		
4. SECONDARY TARGET POPULATION Are any wells part of a blended system? (y/n) N	0	0	
5. NEAREST WELL	0	0	
6. WELLHEAD PROTECTION AREA None within 4 Miles	0	0	
7. RESOURCES	5	0	
T =	5	0	

WASTE CHARACTERISTICS

WC =	18	0

GROUND WATER PATHWAY SCORE: 1

nd Water Target Populations

Primary Target Population Drinking Water Well ID	Dist. (miles)	Population Served	Reference	Value
None				
*** Note : Maximum of 5 Wells Are Printed ***			Total	

Secondary Target Population Distance Categories	Population Served	Reference	Value
0 to 1/4 mile	0		0
Greater than 1/4 to 1/2 mile	0		0
Greater than 1/2 to 1 mile	0		0
Greater than 1 to 2 miles	0		0
Greater than 2 to 3 miles	0		0
Greater than 3 to 4 miles	0		0
		Total	0

rtionment Documentation for a Blended System

Surface Water Pathway Criteria List
Suspected Release

Is surface water nearby? (y/n/u)	N
Is waste quantity particularly large? (y/n/u)	N
Is the drainage area large? (y/n/u)	Y
Is rainfall heavy? (y/n/u)	Y
Is the infiltration rate low? (y/n/u)	N
Are sources poorly contained or prone to runoff or flooding? (y/n/u)	Y
Is a runoff route well defined(e.g.ditch/channel to surf.water)? (y/n/u)	Y
Is vegetation stressed along the probable runoff path? (y/n/u)	N
Are sediments or water unnaturally discolored? (y/n/u)	N
Is wildlife unnaturally absent? (y/n/u)	N
Has deposition of waste into surface water been observed? (y/n/u)	N
s ground water discharge to surface water likely? (y/n/u)	Y
Does analytical/circumstantial evidence suggest S.W. contam? (y/n/u)	N

Other criteria? (y/n) N

SUSPECTED RELEASE? (y/n) N

Summarize the rationale for Suspected Release:

Surface water contamination is not expected due to the distance to the Primary Point of Entry and the large amount of dilution from the Barren Fork River.

Ref: 2

Surface Water Pathway Criteria List
Primary Targets

Is any target nearby? (y/n/u) If yes: Y
- N Drinking water intake
- Y Fishery
- Y Sensitive environment

Has any intake, fishery, or recreational area been closed? (y/n/u) N

Does analytical or circumstantial evidence suggest surface water contamination at or downstream of a target? (y/n/u) N

Does any target warrant sampling? (y/n/u) If yes: N
- N Drinking water intake
- N Fishery
- N Sensitive environment

Other criteria? (y/n) N

PRIMARY INTAKE(S) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Intakes:

Surface water contamination is not expected and all surface water intakes are located upstream of the Primary Point of entry.

Ref: 1,2,8
continued -------

continued -------

Other criteria? (y/n) N

PRIMARY FISHERY(IES) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Fisheries:

Although the Barren Fork River and Collins River are fisheries they are not expectd to be contaminated from the Site due to the distance to the Primary Point of Entry and the large amount of dilution.

Ref: 2,7,8

Other criteria? (y/n) N

PRIMARY SENSITIVE ENVIRONMENT(S) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Sensitive Environments:

Collins River is a State Scenic River but it is not expected to be contaminated from the Site due to the large amount of dilution.

Ref: 7

SURFACE WATER PATHWAY SCORESHEETS

Pathway Characteristics		Ref.
Do you suspect a release? (y/n)	No	
Distance to surface water (feet):	1900	2,10
Flood frequency (years):	>500	31
What is the downstream distance (miles) to:		
a. the nearest drinking water intake?	N.A.	8
b. the nearest fishery?	0.0	8
c. the nearest sensitive environment?	3.8	8

LIKELIHOOD OF RELEASE	Suspected Release	No Suspected Release	References
1. SUSPECTED RELEASE	0		
2. NO SUSPECTED RELEASE		500	
LR =	0	500	

king Water Threat Targets

TARGETS	Suspected Release	No Suspected Release	References
3. Determine the water body type, flow (if applicable), and number of people served by each drinking water intake.			
4. PRIMARY TARGET POPULATION 0 person(s)	0		
5. SECONDARY TARGET POPULATION Are any intakes part of a blended system? (y/n): N	0	0	
6. NEAREST INTAKE	0	0	
7. RESOURCES	0	5	
T =	0	5	

Drinking Water Threat Target Populations

Intake Name	Primary (y/n)	Water Body Type/Flow	Population Served	Ref.	Value
None					

Total Primary Target Population Value	0
Total Secondary Target Population Value	0

*** Note : Maximum of 6 Intakes Are Printed ***

rtionment Documentation for a Blended System

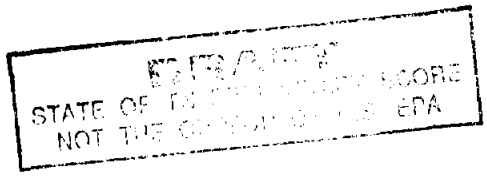
n Food Chain Threat Targets

TARGETS	Suspected Release	No Suspected Release	References
8. Determine the water body type and flow for each fishery within the target limit.			
9. PRIMARY FISHERIES	0		
10. SECONDARY FISHERIES	0	12	
T =	0	12	

Human Food Chain Threat Targets

Fishery Name	Primary (y/n)	Water Body Type/Flow	Ref.	Value
1 Barren Fork River	N	>100-1000 cfs	8	12
2 Collins River	N	>1000-10000 cfs	7,8	12
Total Primary Fisheries Value				0
Total Secondary Fisheries Value				0

*** Note : Maximum of 6 Fisheries Are Printed ***



ronmental Threat Targets

TARGETS	Suspected Release	No Suspected Release	References
11. Determine the water body type and flow (if applicable) for each sensitive environment.			
12. PRIMARY SENSITIVE ENVIRONMENTS	0		
13. SECONDARY SENSITIVE ENVIRONS.	0	10	
T =	0	10	

Environmental Threat Targets

Sensitive Environment Name	Primary (y/n)	Water Body Type/Flow	Ref.	Value
1 Collins River	N	>1000-10000 cfs	7,30	0

Total Primary Sensitive Environments Value 0
Total Secondary Sensitive Environments Value 0
*** Note: Maximum of 6 Sensitive Environments Are Printed *** 0

ace Water Pathway Threat Scores

Threat	Likelihood of Release(LR) Score	Targets(T) Score	Pathway Waste Characteristics (WC) Score	Threat Score LR x T x WC / 82,500
Drinking Water	500	5	18	1
Human Food Chain	500	12	18	1
Environmental	500	10	18	1

SURFACE WATER PATHWAY SCORE: 3

Soil Exposure Pathway Criteria List
Resident Population

Is any residence, school, or daycare facility on or within 200 feet of an area of suspected contamination? (y/n/u)	N
Is any residence, school, or daycare facility located on adjacent land previously owned or leased by the site owner/operator? (y/n/u)	N
Is there a migration route that might spread hazardous substances near residences, schools, or daycare facilities? (y/n/u)	Y
Have onsite or adjacent residents or students reported adverse health effects, exclusive of apparent drinking water or air contamination problems? (y/n/u)	N
Does any neighboring property warrant sampling? (y/n/u)	N
Other criteria? (y/n)	N
RESIDENT POPULATION IDENTIFIED? (y/n)	N

Summarize the rationale for Resident Population:

Contaminants no longer appear to be entering the intermittent stream in significant amounts and since the contaminants of concern are volatiles previous contamination has probably dissipated. Additionally, the nearest residence is 400 feet downstream.

Ref: 2,4,24

SOIL EXPOSURE PATHWAY SCORESHEETS

Pathway Characteristics		Ref.
Do any people live on or within 200 ft of areas of suspected contamination? (y/n)	No	2,24
Do any people attend school or daycare on or within 200 ft of areas of suspected contamination? (y/n)	No	2
Is the facility active? (y/n):	No	2,24

LIKELIHOOD OF EXPOSURE	Suspected Contamination	References
1. SUSPECTED CONTAMINATION LE =	550	

Targets

2. RESIDENT POPULATION 0 resident(s) 0 school/daycare student(s)	0	16,24 2
. RESIDENT INDIVIDUAL	0	
4. WORKERS None	0	2,24
5. TERRES. SENSITIVE ENVIRONMENTS	0	
6. RESOURCES	5	
T =	5	

WASTE CHARACTERISTICS

WC = 18

RESIDENT POPULATION THREAT SCORE: 1

NEARBY POPULATION THREAT SCORE: 1

Population Within 1 Mile: 1 - 10,000

SOIL EXPOSURE PATHWAY SCORE: 2

Exposure Pathway Terrestrial Sensitive Environments

Terrestrial Sensitive Environment Name	Reference	Value
None		
Total Terrestrial Sensitive Environments Value		

*** Note : Maximum of 7 Sensitive Environments Are Printed ***

Air Pathway Criteria List
Suspected Release

Are odors currently reported? (y/n/u)	N
Has release of a hazardous substance to the air been directly observed? (y/n/u)	N
Are there reports of adverse health effects (e.g., headaches, nausea, dizziness) potentially resulting from migration of hazardous substances through the air? (y/n/u)	N
Does analytical/circumstantial evidence suggest release to air? (y/n/u)	N
Other criteria? (y/n)	N
SUSPECTED RELEASE? (y/n)	N

Summarize the rationale for Suspected Release:

During the initial complaint investigation there was a strong odor immediately adjacent to Red Spring; however, the odor is no longer present and the nearest individual is approximately 350 feet away and would not be affected.

Ref: 2,4

AIR PATHWAY SCORESHEETS

Pathway Characteristics			Ref.
Do you suspect a release? (y/n)		No	
Distance to the nearest individual (feet):		350	2

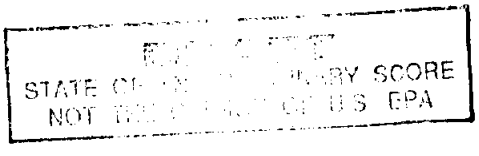
LIKELIHOOD OF RELEASE	Suspected Release	No Suspected Release	References
1. SUSPECTED RELEASE	0		
2. NO SUSPECTED RELEASE		500	
LR =	0	500	

Targets

TARGETS	Suspected Release	No Suspected Release	References
3. PRIMARY TARGET POPULATION 0 person(s)	0		
4. SECONDARY TARGET POPULATION	0	58	
5. NEAREST INDIVIDUAL	0	20	
6. PRIMARY SENSITIVE ENVIRONS.	0		
7. SECONDARY SENSITIVE ENVIRONS.	0	0	
8. RESOURCES	0	5	
T =	0	83	

WASTE CHARACTERISTICS		
WC =	0	18

AIR PATHWAY SCORE:	9



Pathway Secondary Target Populations

Distance Categories	Population	References	Value
Onsite	0	2,24	0
Greater than 0 to 1/4 mile	1182	9	41
Greater than 1/4 to 1/2 mile	1232	9	9
Greater than 1/2 to 1 mile	2110	9	3
Greater than 1 to 2 miles	7893	9	3
Greater than 2 to 3 miles	3770	9	1
Greater than 3 to 4 miles	1006	9	1
		Total Secondary Population Value	58

Pathway Primary Sensitive Environments

Sensitive Environment Name	Reference	Value
None		
Total Primary Sensitive Environments Value		

*** Note : Maximum of 7 Sensitive Environments Are Printed***

Air Pathway Secondary Sensitive Environments

Sensitive Environment Name	Distance	Reference	Value
None			
Total Secondary Sensitive Environments Value			

SITE SCORE CALCULATION	SCORE
GROUND WATER PATHWAY SCORE:	1
SURFACE WATER PATHWAY SCORE:	3
SOIL EXPOSURE PATHWAY SCORE:	2
AIR PATHWAY SCORE:	9
SITE SCORE:	5

SUMMARY

1. Is there a high possibility of a threat to any nearby drinking water well(s) by migration of a hazardous substance in ground water? No

   If yes, identify the well(s).

   If yes, how many people are served by the threatened well(s)? 0

2. Is there a high possibility of a threat to any of the following by hazardous substance migration in surface water?
   A. Drinking water intake No
   B. Fishery No
   C. Sensitive environment (wetland, critical habitat, others) No

   If yes, identity the target(s).

3. Is there a high possibility of an area of surficial contamination within 200 feet of any residence, school, or daycare facility? No

   If yes, identify the properties and estimate the associated population(s)

4. Are there public health concerns at this site that are not addressed by PA scoring considerations? No

   If yes, explain:

REFERENCES

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4. Elwin (Rocky) Hannah, Tennessee Division of Underground Storage Tanks. "Trip Report": Sampling event at Red Spring. January 27, 1994.

5. City of McMinnville (Warren County) Tax Assessors Office. Copy of Parcel Map "G"-58-P.

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11. AWARE Incorporated. Soils and Groundwater Investigations at the Century Electric, Inc. Plant McMinnville, Tennessee. 52 pages. June 1984.

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19. Office of Water, U.S. Environmental Protection Agency. Drinking Water Regulations and Health Advisories. 15 pages. April 1992.

20. John Kizer, TDSF. Phone conversation with Rocky Hannah of Tennessee Division of Underground Storage Tanks - Cookeville Field Office. Subject: Investigation of Red Spring/Sewer. March 27, 1995.

21. John Kizer, TDSF. Phone conversation with Rocky Hannah of Tennessee Division of Underground Storage Tanks - Cookeville Field Office. Subject: Storage tanks near Red Spring. April 10, 1995.

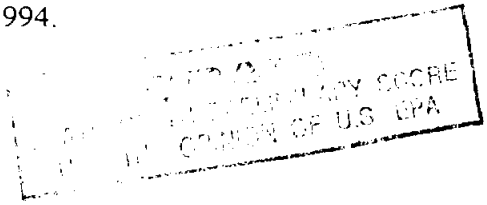
22. City of McMinnville (Warren County) Office of Deeds. Book 128, Page 547; Book 272, Page 379; Book 279, Page 27. Copy of Deeds. April 24, 1995.

23. City of McMinnville (Warren County) Assessor of Properties Office. State of Tennesseee Real Estate Appraisal Card for 202 Red Road McMinnville, Tennessee. Tax Year 1992.

24. John Kizer, TDSF. "Trip Report": Cumberland Lumber on/off-site reconnaissance & records search. April 24, 1995.

25. Tim Stewert, TDSF. New Site Discovery Information. Cumberland Lumber Company. May 17, 1994.

26. Tim Stewert, TDSF. Phone conversation with Ray Spivey Jr. of Cumberland Lumber Company. Subject: Drums at 202 Red Road. March 24, 1994.



27. Tim Stewart, TDSF. Phone conversation with John Jackson of Cumberland Lumber Company. Subject: Drums at 202 Red Road. June 30, 1994.

28. State of Tennessee, Department of Conservation, Division of Geology, Geologic Maps. Cardwell Mountian Quadrangle (328 NW) 1975, McMinnville Quadrangle (92 NE) 1979. 7.5 Minute Series. Prepared in cooperation with Tennessee Valley Authority.

29. United States Department of Agriculture. Soil Conservation Service, in cooperation with Tennessee Agricultural Experiment Station, "Soil Survey of Warren County, Tennessee." 79 pages. Issued September 1967.

30. John T. Weakley, TDSF. Correspondence to Brenda Apple, TDSF. Subject: Threatened and Endangered Species for Cumberland Lumber Company, 89-506. April 26, 1995.

31. John Kizer, TDSF. Phone conversation with Assessor of Properties Office McMinnville, Tennessee. Subject: Flood plain information. April 28, 1995.

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CERCLA

NEW SITE DISCOVERY INFORMATION TN# 89-506

Name of Person
Completing SD Report: Tim Stewart

Date: May 17, 1994

Site Name: Cumberland Lumber Co.

County: Warren

Disc. Date 6/21/94

Site Address: 202 Red Road

City: McMinnville

Zip Code: 37110

Latitude: 35/41/15/

Size of site: 350' x 300'

Longitude: 85/45/45/

Quadrangle: Mcminnville

General Description of Site: Old abandoned buildings, 9 visible drums - some bulging some unsealed, old foundations of two additional buildings, Red Spring behind buildings (see photos) presently used for storage.

Site Status: _____Active __X__Inactive RCRA Facility? _____yes __X__no

Years of Operation 1962 to current

Waste believed present and quantities: Toluene, TCE, Benzene, 1, 1-DCA, 1,1-DCE, Xylene, Ethyle Benzene (see sample results)

Brief description of potential hazard: Spring has strong odor and flows through a residential area into Barren Fork River

CERCLA

NEW SITE DISCOVERY INFORMATION

Site Owner: Cumberland Lumber Co.

Address: 202 Red Road

City: McMinnville, TN

Phone (615) 73-9542 **Zip** 37110

Site Operator:

Address:

City:

Phone ( ) **Zip**

Other resp. parties:

Address:

City:
Phone ( ) **Zip**

Information obtained from:

Address:

City:
Phone ( ) **Zip**

TDSF Contact: Tim Stewart

Phone (615) 741-7391

Site Contact: Ray Spivery Jr.

Address: same as owner

City: **State** **Zip**
Phone ( )

Comments:

PLEASE ATTACH A COPY OF THE TOPO MAP WITH THE SITE CLEARLY MARKED. RETURN THIS TO THE PA/SI PROGRAM-SUPERFUND SECTION-CENTRAL OFFICE.

SDTIM1.doc

RCRA/NPL POLICY QUESTIONNAIRE FOR INITIAL SCREENING

Site Name: Cumberland Lumber Co.

City: McMinnville, TN State: TN

EPA I.D. Number: Not Applicable to this parcel

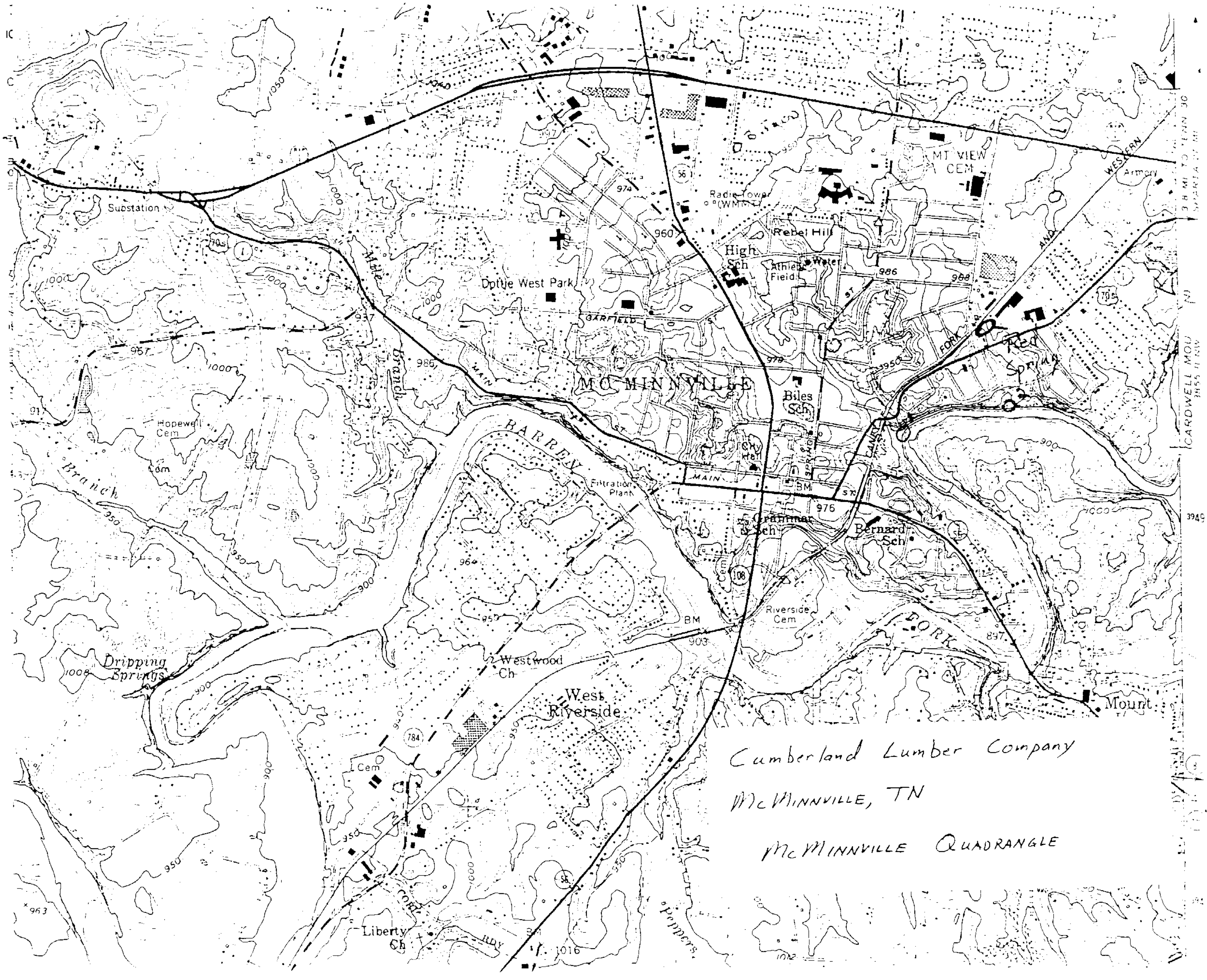
Type of Facility: Generator_____ Transporter_____ Disposal_____

Treatment_____ Storage (more than 90 days) _____

I. RCRA APPLICABILITY	Yes	No
Has this facility treated, stored, or disposed of a RCRA hazardous waste since Nov. 19, 1980?	_____	_____
Has a RCRA Facility Assessment (RFA) been performed on this site?	_____	_____
Does the facility have a RCRA operating or post-closure permit? If so, date issued _____.	_____	_____
Did the facility file a RCRA Part A application?	_____	_____
If so:		
1. Does the facility currently have interim status?	_____	_____
2. Did the facility withdraw its interim status?	_____	_____
3. Is the facility a known or possible protective filer?	_____	_____
Is the facility a late (after Nov. 19, 1980) or non-filer that has been identified by EPA or the State?	_____	_____

STOP HERE IF ALL ANSWERS TO QUESTIONS IN SECTION I ARE NO

II. FINANCIAL STATUS		
Is the facility owned by an entity that has filed for bankruptcy under Federal or State laws?	_____	_____
III. RCRA ENFORCEMENT STATUS		
Has the facility lost authorization to operate or had its interim status revoked?	_____	_____
Has the facility been involved in any other RCRA enforcement action?	_____	_____


Substation
Mile Branch
Dottie West Park
MC MINNVILLE
High Sch
Rebel Hill
Athletic Field
Water
Radio Tower (WMMT)
MT VIEW CEM
Armory
WESTERN
AND
FORK
Red Spring
Biles Sch
Grammar Sch
Bernard Sch
Riverside Cem
Filtration Plant
BARREN
FORK
Hopewell Cem
Branch
Dripping Springs
Westwood Ch
West Riverside
Liberty Ch
Peppers
Mount
MAIN
GARFIELD
SPRING
CARDWELL MOUNTAIN
3855 II NW
Cumberland Lumber Company
McMinnville, TN
McMinnville Quadrangle